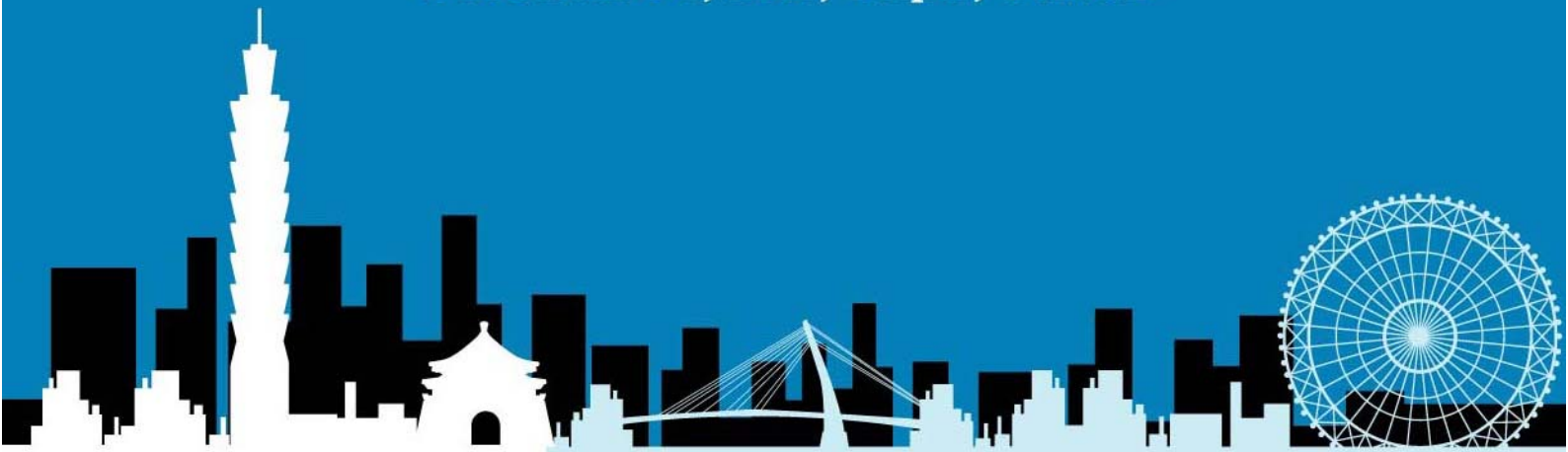
41st APACPH Conference

Celebration of the 25th Anniversary of APACPH

December 3-6, 2009, Taipei, Taiwan



Proceedings

Host Organizations

Taipei Medical University

College of Public Health, National Taiwan University

Taiwan Public Health Association

Co-Organizations

Association of Dental Science of Republic of China

Injury Prevention and Disaster Medicine Research Foundation

Kaohsiung Medical University

Taiwan Epidemiology Association

Taiwan Society of Oral Health

Tzu Chi University

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Keynote Speech

KN-01

Globalization of Prevention Education, the Supercourse

Ronald E. LaPorte
University of Pittsburgh, USA

The Supercourse is a global network of over 56,000 faculties from 172 countries. The mission of the Supercourse is to improve training in the area of Global Health and Prevention. In order to accomplish this we have extracted from the network 4075 PowerPoint lectures and shared these in a free open source library of lectures. There are 20 lectures from Nobel Prize winners, as well as lectures from the Director of the NIH, CDC, and WHO. The slides in the lecture library is used by educators world wide to construct their own lectures. Over the past year over one million people have been trained using the lectures. Our goal is to at least double the amount of training about Global Health and prevention in the next three years.

Plenary Speech

PL-01

Prevention of Hepatitis B Virus Infection –The Impact and Problems

Mei-Hwei Chang
National Taiwan University, Taiwan

Universal hepatitis B virus (HBV) Vaccination program has effectively reduced acute and chronic hepatitis B, and hepatocellular carcinoma in vaccinated children. Ninety percents of the hepatitis B surface antigen (HBsAg) seropositive rates have been reduced in the birth cohorts born after the vaccination program. Yet breakthrough HBV infection is still an important problem to be overcome for future eradiation of hepatitis B and its related complications. Maternal transmission accounts for approximately 90% of the breakthrough HBV infection. The main causes of break through HBV infection include high maternal viral load, intrauterine infection, hepatitis B surface gene mutants, immune compromised hosts, etc.

HBV vaccination has increased the rate of HBV surface gene mutants among the vaccinees with breakthrough HBV infection. However, due to the remarkable reduction of HBsAg carrier rate after HBV vaccination program, the prevalence rates of HBV surface gene mutants in the total vaccinated population were not increased in the past 10 years.

Long term surveillance and research of the vaccine related mutants in virus-host interactions are needed. Surface gene mutants, with limited evidence of spread as yet, are not urgently needed to be integrated into the HBV vaccine. Further studies are required to design better strategies to prevent breakthrough HBV infection which includes both wild type and surface gene mutants.

PL-02

CoPanFlu-International: Pandemic Influenza, International Research and Training in Public Health

Antoine Flahault
EHESP School of Public Health, Rennes & Paris, France
President of the Association of Schools of Public Health in the European Region (ASPHER)

Objective: Pandemic influenza has become a major global issue in public health. International research needs to be rapidly set up and Schools of Public Health may take this opportunity to show its timeliness and responsiveness, and to improve training programmes in early warning, disease surveillance and epidemiology, as well as in crisis management.
Methods: CoPanFlu-International is a set of cohorts of 1,000 households set up in various countries with a standardized protocol, using same laboratory techniques, same questionnaires, in order to allow for international comparisons thereafter. It will be the unique opportunity to transfer technologies (diagnostic tests, methods, sampling) between centers, and to improve quality of epidemiologic studies in training staff in charge of the programme.
Results: CoPanFlu-International consortium gathers 10 countries: France (two cohorts in Mainland and in La Réunion, Indian Ocean overseas department), Morocco, Senegal, Djibouti, Mali (14 cohorts within the Millenium Villages), Laos, Bolivia, USA, Serbia, Ukraine. This programme will allow for comparisons of the impact of pandemic waves in various countries, and particularly in countries where little knowledge has been acquired in the past on Influenza. It will also allow for scientific exchanges in various fields: epidemiology, virology, immunology, mathematical modelling, sociology, economy. It is already a matter of education and training. It may also become a network of public health investigators at a global level, used in the future for other purposes.
Conclusion: There is an urgent need for collecting data regarding impact of pandemic influenza in various countries, particularly those where there is a clear lack of knowledge. CoPanFlu-International helps for responding to this need. It may also act as a tool for public health field education among involved professionals.

PL-03

National Health Insurance in Taiwan—from Premature to the Symbol of Taiwan

Po-Ya Chang
Universal Peace Federation, Taiwan

Since NHI was implemented from 15 years ago, it has molted to be one of the most significant social security mechanisms and country's showcases of Taiwan. General speaking, the achievements of NHI include: high enrollment rate (99%), low administration cost (1.6% of total reimbursement), wide spectrum medical coverage (ambulatory care, inpatient care, medicine, dental care

and traditional Chinese medicine), low total health expenditure (6.1% of GDP), high consumer satisfaction (70% in average) and rational health outcomes. There were almost 500 guests from 36 countries to visit the Bureau of NHI to understand and learn the system running in 2008. After the disaster earthquake of Richter magnitude scale 7.3 in 1999 and lethal flood in this August, the NHI and health delivery system of Taiwan had been proved that the social solidarity mechanism is not only well-done but also firm and flexible. To understand the successful reasons, all of the achievements should be traced to the planning of NHI started 20 years ago, brave initiating the system under inadequate preparation and continuous improvement after implementation. It was fortunate to be one of the decision-makers in the critical moment of the NHI implementation, I conclude the democratic system of the country, comprehensive study and research of expert groups, leadership of decision-makers, execution of administration staffs, support from professional groups and adaption of information technology, all of above 6 items are the most important and inevitable factors to carry out the NHI miracle of Taiwan.

PL-04

Opportunities and Challenges for Publishing Research

William S M Summerskill
The Lancet, London, UK

The world is turning to the Asia-Pacific region for solutions to shared problems. In particular, good science is making a home in this area, reflected by the growing number of Asia-Pacific publications in international journals. The opportunities to publish local research that can inform communities worldwide have never been better. *The Lancet* celebrates this fact and for several years has collaborated with local institutions to help develop research capacity within the region. However, publication is a competitive enterprise with many challenges, particularly for researchers with limited resources. In this presentation, *Lancet* Executive Editor Bill Summerskill will outline specific opportunities that local researchers may wish to consider, as well as offering potential solutions to common challenges.

Symposium 1- Historical Milestones

SY1-01

Historical Milestones for APACPH and Taiwan

Wen-Ta Chiu

President, Taipei Medical University
President, Asia-Pacific Academic Consortium for Public Health

Phase I: 1986-1990

- Three Phases Landmarks in APACPH history with Taiwan can be noted.
- Phase 1: 1986-1990 leadership involvement APACPH & Taiwan.

  The Hawaii connection. Taiwan's Minister of Health, Prof. Chun-Jen Shih invited APACPH to assist in the training of senior staff in management and public health, in collaboration with School of Public Health of the University Hawaii. Prof. C. C. Yeh, later also the Minister of Health in Taiwan, was in charge of health manpower development then. Prof. Yaw-Tang Shih, Dean of the School of Public Health, National Defense Medical College, was closely affiliated to APACPH since then. APACPH assisted Taiwan's government in sending more than 50 staff for training overseas in short periods as well as in the MPH programs in key US universities, including training programs in the SPH University of Hawaii, while APACPH members and Alumni from US Universities actively involved.
- Phase 2: the 90's - Universities in Manpower Development

  Taiwan's Minister of Health Prof. Po-Ya Chang was closely linked to APACPH activities and supported leadership development and women's health issues. The National Taiwan University became the first University to join the APACPH, particularly in collaboration of training programs. Prof. Ruey-Shiung Lin, the first dean of the School of Public Health of the NTU later became VP of APACPH. The APACPH organized the first meeting in Taiwan on care of elder populations, while faculties from Japan, Taiwan, and Korea and several APACPH member institutions provided the training in leadership on elderly care issues. Prof. Wen-Ta Chiu then as the Dean of School of Public Health in the Taipei Medical University participated at the conference and made his first presentation to the APACPH on subjects of injury prevention & implementation of helmet use in Taiwan. Prof. Ruey-Shiung Lin was acknowledged for his academic and professional work for health improvement in Taiwan and received APACPH PH Recognition Award. The similar training was expanded to cover Taiwan's local provincial health department and on leadership & management of health care. Prof. Lin and Prof. Fred Chang SG were intensively involved.

  Later on, the China Medical University had also collaborative activities with the APACPH on related with traditional medicine and environment health/ Several joint programs of study were developed with APACPH institutions and others such as Johns Hopkins University. Then the Minister of Health, Prof. Po-Ya Chang, had played a key figure in enhancing the roles of health care for women in the Asia Pacific Region and led the APACPH team at the Global Health Council at Washington
- Phase 3: the 21st Century new era - Expanding and consolidating partnerships

APACPH's influence on regional development has grown with commitment and specific achievements. Dr. Mark Liveris, APACPH former President from 1996-1998, Prof. Colin Binns, APACPH former vice president 2002-2004, Prof. Brian Oldenburg, the honorary secretary since 2004, and Prof. Kenji Hayashi, the former president 1998-2001, togethe enhanced management by establishing a very effective APACPH in the Tokyo office. Prof. Kenji Hayashi also published an APACPH book on health care management in the Asia Pacific region. Prof. Liming Lee, former president 2001-2003, further expanded the APACPH membership and brought in Hong Kong, later shown as a very active member. The SARS crisis was a challenge to APACPH and the successful global control was recognized when APACPH Awarded WHO Director-General and the Vice Premier of the People's Republic of China for the great efforts. Prof. Anuar Zaini, former president 2003-2005 also elevated APACPH status across the university and departments in the region. Prof. Amin Jalaludin, vice president since 2008 helped enhance membership, including Malaysia. Prof. Richard Southby, the past president 2005-2007 served at a time of many organizational developments and helped stabilize the APACPH.

- Expanding Horizons

Several area are of essential interest of the APACPH in the future, including

- ICUH
- COLLABORATING Centers
- Disaster Management & Injury Prevention
- Oral Health & Cancer Prevention
- Rural/Island Health
- Peace & Health
- Research & Publication

41st APACPH Conference in conjunction with 25th Anniversary of APACPH that has improved our quality and collegiality

SY1-02

The Beginnings: Leadership as Instrument of Change

Walter Patrick
University of Hawaii, USA

APACPH was founded in January 1984 with just five member Universities-Hawaii, Mahidol, Peking Medical, Philippines and Singapore National. Since then the Asia Pacific Academic Consortium for Public Health (APACPH) has grown to 64 members in 21 countries. The membership spans the globe from George Washington University USA to University of Kazakhstan in Almaty and from Tokyo University Japan to Auckland University New Zealand and several other leading universities in countries in between. Unlike other organizations tending to specialize in research or elite partnerships, our purpose was to create long lasting collaborative partnership among the best to assist the neediest with the support of ministries of health and major international organizations. In that perspective we have maintained our founding vision and the working relationships with global agencies like the WHO UNICEF CDC WB whose leadership witnessed the birth of APACPH in Kauai. Twenty Five is a landmark time for any organization more so for fragile international partnerships. As we assess and enjoy the successes in collegiality collective achievements and community outcomes, we are also challenged by the many tasks that lay ahead.

Organizational Networks: The APACPH Collaborating Centers

Promoting leadership for Health was one of our primary goals to influence policy and redirect services to the underserved. The WHO Collaborating Center established (1987-2000) at the University Hawaii with partnership of international agencies and member universities was the key to this effort .Not only did world leaders support this effort but people like Hafdan Mahler(DG WHO) and James Grant (DirectorUNICEF) and their Regional Directors(SEARO WPRO and PAHO) served as visiting faculty to the center conferences and training programs. Nearly 100 specialists were trained. Doctoral (5) Masters(38) and other research fellows(56) on short term programs were partly or fully funded by the Center, member universities or our global partners. A Multi-University Joint MPH program was generated through this effort.
Over the years APACPH developed the concept of Collaborating Centers where one or more universities with expertise in an area of need (Oral Cancer, hospital management, etc.) and resources would partner with one or more universities usually in an economically less developed country (LDC) in mitigating the problem. Through demonstrated active partnerships, four such APACPH collaborating centers have been established: (i) Disaster Management and Injury Prevent (Lead University Taipei Medical University) (ii) Oral Health & Cancer Prevention (Lead University Kaohsiung Medical University) (iii) Rural /Island Health Research (Lead University University of Malaya Sabah) and Peace & Health (Lead University UHawaii; USC and Colombo Medical College).Another one on Humanitarian Assistance is being planned.

SY1-03

Island Health: Bridging Past and Present

***Tomiko Hokama*[1], *Masamine Jimba*[2], *Colin Binns*[3], *Wah Yun Low*[4]**
1. University of the Ryukyus, Okinawa, Japan
2. Tokyo University, Tokyo, Japan
3. Curtin University, Perth, Australia,
4. University of Malaya, Kuala Lumpur, Malaysia

Objective: The Asia-Pacific region is a region that has small islands. In these islands, people face difficult challenges for the delivery of health care due to complex health, communication and development problems.
The Ryukyu Islands have been known as longevity islands with historical successful primary health care stories of elimination of tropical diseases, such as malaria and lymphatic filariasis (LF). After the 2000 G8 Summit in Okinawa, the Global Fund was established in 2002 focusing on infectious diseases. It was also noted in the 4th Pacific Islands Leaders Meeting in 2006, that Okinawa's potential, as an island prefecture of Japan, can contribute further to the sustainable development of the pacific region. Furthermore, APACPH was founded in 1984 and aimed at contributing towards enhancing public health in the Asia-Pacific region. The University of the Ryukyus joined in 1990. In order to make the past to be instructive, an effort to bridge the past and present was tried by using a model case of a LF Elimination.
Methods and results: Literature search and review of LF elimination was carried out to clarify the factors of the successive elimination project in Okinawa. The suggested factors were task shifting to paraprofessionals and community participation. The current situation of LF control programme in endemic countries was analysed to point out major problems in each context. Each country is facing problem in service delivery, health work force, health information system, etc. Based on analysis of these problems, the lessons learnt from Okinawa experience will be applied in each context of different islands.
Conclusion: APACPH can learn from Okinawa's success in disease control and it can continue to develop island health through education, research and training of healthcare professionals. More needs to be met to develop island health both for the control of communicable and non-communicable diseases.

SY1-04

APACPH Achievements and New Public Health Challenges in the 21st Century

Pornpimol Kongtip
Mahidol University

After the propitious WHO meetings of the Association of the Schools of Public Health in the Middle East, Africa, S.E. Asia and the Western Pacific regions, senior public health experts met in Bangkok and established the Asia Pacific Consortium for Public Health for the Asia Pacific region. Dr. Debhanom Muangman, then Dean of the Faculty of Public Health, Mahidol University, Bangkok, Thailand, was unanimously elected as the first President of APACPH and Dr. Jerrold Michael, Dean of the University of Hawaii, U.S.A., was elected treasurer. WHO and USAID gave some financial support from the beginning. 22 Public Health Institutions from the Asia Pacific region joined this consortium and so the constitution of APACPH was drafted and the dissemination of the quarterly published APACPH journal of Public Health also began.
Our international collegial collaborations were later expanded when many other well developed countries such as Australia, Japan, and China, also gave funding support.
At Mahidol alone, in 16 years, we have graduated over 19,000 Public Health workers, many of whom were active in subsequently establishing 17 more schools of Public Health in Thailand. Also, almost 900 students from foreign countries have returned to work in their countries after graduating from Mahidol. Our achievements have not gone un-noticed. Our global contribution has been acknowledged by both my receiving the Harvard School of Public Health Alumni Award of merit in 2003, and also our being the recipient of the 2009 Bill Gates foundation which kindly donated

$8 million to facilitate our extensive Population Development Association project.
In this 21st century we are living with many new Public Health challenges, such as:
1. Population problems i) an aging population, and ii) a refugee population.
2. Emerging new epidemic diseases and new chronic diseases much as H1N1A flu, plague, and HIV etc.
3. Drug addiction and mental illnesses, and 4. An array of environmental problems, and an inadequate budget to combat these challenges.
Ladies and gentlemen while trying to solve all the above Public Health problems with the best medical and public health knowledge, compassion, appropriate technologies, alternative medicines etc., in order to achieve the goal of sustainable health development before the end of the 21st century, I strongly hope that all of you take good care of your health and also the health of your loved ones. Exercise regularly and refrain from drinking alcohol and smoking. I also recommend that you meditate to calm your mind and body. I meditate for 10 minutes every day and it yields excellent results. Lastly, I wish you all success and happiness in all of your personal and professional endeavors.

Symposium 2 - Health and Green University

SY2-01

Education for Sustainability = Healthy Universities

Ian Thomas
School of Global Studies, Social Science and Planning, RMIT University, Melbourne, Australia

Universities play a critical role in shaping the professionals and decision-makers of the future. The education students receive, plus the physical and social situations in which they receive education at universities, guide their future practice. So we need to ensure that students gain an education that helps them to maintain their own health, and to contribute to public health, both directly and through the health of ecosystems. Such issues are not confined to the class-room, but are evident in the students' interactions with others, and with their interactions with their physical surroundings.
Irrespective of their faculty or discipline, Education for Sustainability (EfS) provides a framework for making connections between the students' curriculum, the place where they study, their profession, and the community in which they live. Through EfS students are involved in educational approaches that develop a range of skills that enable students to analyse the effects that their decisions can have on the physical environment and ecosystems, on social issues (including public and their own health), and on economics. Development of these skills is assisted by use of the university campus as a 'living laboratory' where projects and internships are used to build sustainability into campus operations, and can be used to support the health of ecosystems, the human community and individuals. These skills are then available when students graduates and make work-related decisions that can affect ecosystem health, public health, and their own health.
EfS is an important base upon which healthy universities can be established. To provide direction for implementation of EfS the presentation will identify the skills that are associated with this area of education, and examine the role of Problem Based Learning in development of skills.

SY2-02

Chemical Management System in Academic Activities- Experiences in Kyoto University on Chemicals Registration and Asbestos Control

Shin-ichi Sakai
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Various kinds of chemical substances are used through research and education activities at universities. Appropriate management of the chemicals is essential for protecting students' and staffs' health and from the viewpoint of environmental pollution control.
Management system in Kyoto University for many chemicals used in our daily academic life is reported together with the management of the past used asbestos.
The amount of chemicals used at Kyoto University in 2006 was; Chloroform: 17tons/ Dichloromethane: 10 tons/ Toluene: 4 tons and Benzene: 0.8 tons. We try to use as little amount of chemicals as possible and have introduced a system, KUCRS (Kyoto University Chemicals Registration System), for the purpose of appropriate management of substances which are in use. This is a uniform management system using web to grasp the status of chemical substances by registering them. It enables us to calculate the transfer amount of chemicals into the air, water and wastes from the data on inventory quantity and usage of chemicals. Results obtained are reported to the PRTR (Pollutant Release and Transfer Register) system.
Health damages by asbestos are now a nationwide concern in Japan. The number of deaths due to malignant mesothelioma, mainly caused by exposure to asbestos, amounted to around 1000 person per year. The main causes of fliable asbestos, which led to its exposure to human, has shifted to the process of renovation, dismantle, rebuilding, and disposal of building from the previous manufacturing, processing and using. At universities, we still have buildings that contain asbestos, and have been trying to take measures to remove them. It is important to prevent exposure of human to asbestos and its emission into the environment during removal.

SY2-03

Integrating Health, Diversity, and Environment through Building Campus Cultures of Sustainability

Harold Glasser
Western Michigan University, USA

In January of 2008, President John M. Dunn set out to make WMU an international campus sustainability leader by creating a "culture of sustainability". President Dunn's vision consists of integrating "Three Pillars": Health and Wellness, Diversity and Inclusivity, and Sustainability into one over-arching approach to use higher education to help improve quality of life for all. Building on the tremendous, but under publicized campus greening efforts of our staff, the requirement of our university mission "To advance responsible environmental stewardship", and a 2003 "Environmental Mission Statement" approved by the Faculty Senate and Western Student Association, President Dunn signed the Talloires Declaration. He also created a Universitywide Sustainability Committee (PUSC)—consisting of key administrators, operations staff, students, and faculty from across the campus—to help assess our progress on sustainability and to begin to chart a course for our future. As a first-step toward developing a full-scale sustainability strategic plan, he charged the Committee with the task of identifying a catalog of strategic sustainability initiatives. In an effort to develop a baseline for our campus greening efforts and to systematically identify opportunities for new initiatives, the President's Universitywide Sustainability Committee reviewed each of the Talloires Declaration's ten action plan items and assessed the status of WMU's activities in relation to them. Our university's activities mirror national campus sustainability trends as documented by the "National Report Card on Sustainability in Higher Education" and the "College Sustainability Report Card" in many ways. During a series of meetings and workshops from March through October 2008, the PUSC engaged in a process of brainstorming, prioritizing, and refining potential sustainability initiatives. Our criterion for culling and prioritizing the initiatives was our collective perception of their ability to fill key gaps and leverage significant, positive change over time. The initiatives fall into five general categories: (1) Governance and Administration, (2) Operations & In-reach, (3) Community Service & Outreach, (4) Curriculum, and (5) Research. Each initiative is also characterized by whether we considered it to be technical (T) or planned (P). Technical initiatives are generally amenable to relatively easy, straightforward implementation, which results in a positive payback or only demands a modest allocation of funds. The decision to move forward on technical initiatives typically involves a small number of campus decision-makers. Planned initiatives, on the other hand, often require an extended, ongoing conversation among several campus constituencies; complex, high-levels of coordination; long lead times; or significant allocation of resources. The majority of the recommended initiatives are technical and all of them can be started within the next three years. The Report was presented to the President's Senior Leadership Team in January, 2009 and made public on WMU's Sustainability Website in February, 2009. An ambitious and achievable set of initiatives are already being be built up incrementally as resources become available and as organizational capacity is developed. Because certain combinations of these initiatives dovetail synergistically, they can support an integrated planning process that considers WMU's systems, mission, goals, and strengths and weaknesses in a systematic, anticipatory manner. Finally, because progress resulting from introducing these initiatives will be readily apparent and measurable, it can help facilitate capacity building and create a foundation for seamlessly integrating sustainability considerations into the university's long-term strategic and master planning processes—thus fostering President Dunn's vision of creating a campus culture of sustainability by modeling WMU's sustainability commitments.

SY2-04

Green University Initiatives for Promoting Health of Human Ecology in Taiwan

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2. Graduate Institute of Environmental Engineering, National Taiwan University, Taipei, Taiwan, ROC
3. Chinese Society for Environmental Education, Taipei, Taiwan, ROC

As sustainability becomes the general consensus for the core idea of human society development, higher education institutes are inevitably playing the key role in promoting and implementing it. Since 1970s, universities in many countries in the world have shaped operation, maintenance, and development with the idea of sustainability. Conferences were held, declarations were signed, and organizations were established for linking colleges and universities in sustainability related issues. In Taiwan, the need for higher education institutes in taking sustainability into consideration in all aspects is also urgent, especially in recent years as citizens is becoming more and more environmentally literate.

In late 1990s, the Ministry of Education (MOE) of Taiwan conducted environmental systems management (EMS) projects on safety and health issues in university laboratories. This can be treated as the pioneer work in campus sustainability issues because in the past a major part of the hazardous waste produced in these laboratories was discharged into the environment without proper treatment. In 1998, the MOE initiated a "sustainable campus" program for elementary and high schools by promoting green building together with sustainability oriented curricula. However, campus sustainability issues in colleges and universities were not in the agenda at that time. Later in 2002, the term "Green University" was presented in the area of

environmental education as a project for developing an evaluation index system on campus sustainability. In 2003, the first workshop on Green University was held at National Kaohsiung Normal University. These were the milestones for initiation and development of campus sustainability in Taiwan.
As the government, industries, and citizens gave more and more concern on global warming and GHG reduction, carbon neutrality issues for universities caught the intention of MOE in the following years. On the World Environment Day in 2007, the minister of education declared that energy conservation would be one of the priorities in operation of higher education institutes. In late 2007, the first Green University project sponsored by the MOE was contracted. The administrative power in the higher education system firstly showed its critical role in promoting campus sustainability for universities.
The Green University Initiatives in Taiwan then took actions in promoting the concept and practices related to campus sustainability among universities. A Green University Committee under MOE was formed, which includes government officials of EPA and other agencies, university presidents, and scholars/experts. This committee offered guidelines on scoping and goal setting of the Green University project. In 2008, several university educators and ex-ministers of education were also interviewed for collecting ideas on how to promote the concept and implement action plans. Basically, both top-down and bottom-up strategies would be employed, and all aspects in terms of human ecology, including the environmental health of the campuses, the environmental management of the administrations, and environmental education for students.
In 2009, thirteen universities were selected as the first group of modeling green universities of Taiwan and twelve of them signed the Talloire Declaration. An evaluation system serving the administrative purposes of the MOE is also currently being developed based on the previous evaluation framework developed several years ago. It is anticipated that in several years more and more universities can be green and the triple bottom lines for sustainability, environmental, societal, and economical health will be taken into account in operation, maintenance, and development of the universities.

Symposium 3- Health, Peace and Harmony

SY3-01

Building Bridges for Peace in Conflict- The Vital Contribution of the Health Sector

Nigel Pearson
Freelance Consultant, but works with: UNICEF, UNHCR, UNFPA, DFID, Merlin, LSHTM, Oxford University and EC consultancies, UK

SY3-02

Taiwanese Experience of Public Health & Peace Work in Africa

Hou-Chaung Chen
Center of Health Action for New Global Equity, Taiwan

(More detail will be presented during the talk)

SY3-03

Capacity Building for Public Health Personnel from Thailand Perspectives

Phitaya Charupoonphol
Faculty of Public health, Mahidol University, Thailand

The health of all peoples is fundamental to the attainment of peace and world's security. The highest attainable standard of health is one of the fundamental rights of every human being, without distinction of race, religion, political belief, and economic or social condition. Since a few decades ago, key areas of communicable disease control, basic minimum needs, and primary health care have been focused with the collaboration between the Royal Thai Government and several organizations.
In the 21st century, the ability to live harmoniously in a changing and challenging world is essential to all world population. Public health, focusing on health promotion and protection, has played a significant role as basic principles to strengthen people's happiness, harmonious relations, and world's security. In addition, workforce shortage has been globally recognized as a major mismatch between population needs and the available health workforce in terms of overall numbers, relevant training, practical competencies, and sufficient diversity (World Health Report 2006). Similar to other countries, capacity building for public health personnel is proposed in this paper as a lesson learnt from Thailand perspectives.
In Thailand, King's philosophy of sufficient economy has been used to guide country development since the 10th national health plan. People are encouraged to help each other, strengthen the community, maintain unity, and develop a learning process that stems from a stable and strong foundation. In order to create sustainable benefits and to develop the nation's stability progressively, moderation, reasonableness, and self immunity are proposed as three main principles of sufficient economy.
Capacity building for Thai public health personnel have also been shifted to the improvement of a balance in the state of mind, social affairs, managing natural resources and the environment, as well as encouragement of the villagers' local wisdom and technology development.
In Thailand, schools of public health, public health training centers, and other educational programs are encouraged to be more responsive to the recruitment and training needs of local public health agencies, particularly those in remote locations. Collaboration between relevant educational programs and local public health agencies are strengthened. International network in public health education has been developed to

improve and transform health care systems to meet world people's need. However, public health personnel need to be trained as strong, self-reliant, compassionate and flexible. Besides, one should possess a good conscience and place public interests on a higher priority, above one's own.

SY3-04

Is Peace Conducive to Quality Reproductive Health Services?

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Peace and harmony are much appreciated concepts of societal development while at a personal level good health is greatly valued. Globally peaceful times are intermingled with natural as well as man made disasters. While the impact of such disruptive events on the social, economic and health status of countries, regions and continents have been assumed and analyzed the influence of peace time on these indicators is unclear. This presentation attempts to further analyze the progress of reproductive health services in relation to the benefits provided by peace and focus on barriers if any towards achieving an ideal status.

For this analysis development of reproductive health services and the national and regional status of health in Sri Lanka are considered. Sri Lanka which has a population of 19.1 million has demonstrated very commendable achievements in its national reproductive health indicators. Conflicts, insurgencies and natural disasters such as the Asian tsunami 2004 have occurred with devastating loss of human life and property. In spite of these the country has reduced its Total Fertility Rate to below 2.0 by 2000, maternal mortality rate to below 100 per 100,000 live births by the year 1975 and gained many other achievements in reproductive health. It is however valid to evaluate the reproductive health parameters in selected areas of poor performance in relation to periods without turmoil and those in the areas affected by disasters. Nuwara–eliya district in the central hill country and Monaragala district which are in the non conflict areas have been poor performers in relation to maternal survival as have Maternal mortality ratios of over 50 per 100,000 LB. In contrast Trincomalee, Batticloa and Kilinochchi which also have MMR over 50 per 100,000 LB are in the areas of conflict. The reasons for the high level of MMR in the two groups of districts could be expected to be different and would be serious factors to consider in developing strategies to reduce maternal mortality in the respective locations. During the past forty years Sri Lanka experienced a series of major devastations. The "southern insurgency" arrived on two occasions the first in 1971 to 1972 and the second 1987 to 1989. Both events were severe acute disruptions of the entire social fabric. The tsunami of 2004 was a severe acute problem affecting the coastal areas in the Southern and eastern parts of the country. The thirty year conflict in the northern and eastern provinces of Sri Lanka is an example of a gradual, persistent and harsh reality. The reproductive health performance under these circumstances and its gains if any may provide an insight into the policies needed to provide quality reproductive health the people of Sri Lanka require during the time of peace.

During time of peace many other factors affect the reproductive health status. The serum and seminal plasma levels of agro-chemicals were demonstrated to be significantly higher in those plantation staff from tea estates using these substances in comparison to those indulging in organic methods of agriculture. Similarly pollution caused by lead in vehicles has caused serious effects on infant health which was reversed by the use of un-leaded fuel. During the time of peace if Sri Lanka is to achieve the millennium development goals by 2015 all health and non health factors need to be further strengthened and re-organized.

Symposium 4- Injury Prevention

SY4-01

From Risk Perception to Health Effects: The Case of the Chikungunya Outbreak in La Reunion Island

Michel Setbon
EHESP-CNRS, France

Between March 2005 and May 2006, La Réunion Island was hit by an outbreak of chikungunya fever which affected 260,000 people (38% of the island's population). Chikungunya is a viral disease transmitted through mosquito (*Aedes albopictus*) for which there is no effective treatment nor vaccine. La Réunion is a French overseas territory located in the Indian Ocean and provided with all modern medical and public health facilities. In order to identify the distribution of the infection and factors related to probability of contamination, a socio-epidemiological survey was conducted in May 2006 on a representative sample of the population (N = 1,035). Data collection included two families of individual factors: on the one hand, objective ones as socio-economic, demographic and environmental characteristics and, on the other hand, subjective factors such as perceptions of risk, the experience of the disease, the perceived effectiveness of methods of protection, knowledge and beliefs about the origin of the disease and routes of transmission, as well as attitudes and protective methods employed. The statistical analyses (bivariate and multivariate analyses) reveal meaningful, socially differentiated groups related to probability of contamination. Like that, it was shown that probability of contamination was significantly associated with, 1) a socioeconomic status characterizing disadvantaged people living in individual houses with gardens; 2) the existence of alternative beliefs (not scientifically proven) on the causation and transmission of the Chikungunya infection which, along with a fatalistic attitude, create a feeling of uncontrollability to protect oneself against the

virus. In terms of adopted protective behaviours, only the frequent use of repellent sprays and creams was found to be positively associated with a reduced probability of contamination. In sum, factors such as socioeconomic conditions, place of residence, belief systems and behaviours were all closely interdependent, forming socio-cultural models that were more or less favourable to contamination. So the prevalence of Chikungunya outbreak appears to be structured primary by the mental representations of individuals and by environmental factors. These findings suggest that subjective perceptions of infectious diseases should be more systematically investigated and taken into account to improve effectiveness of public health policies.

SY4-02

Emergency Air Medical Service in Interhospital Transport and Disaster Evacuation

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2. Institute of Injury Prevention and Control, Taipei Medical University; Department of Neurological Surgery, Taipei Medical University-Shuang Ho Hospital
3. Institute of Injury Prevention and Control, Taipei Medical University; International SOS, Taipei

Objective: The special geographic location makes people in Taiwan under the threat of various disasters, for example typhoons. Typhoon Morakot first hit Taiwan on August 6th, causing worst floods since 1959. Emergency evacuation of badly damaged remote villages and wooded mountains mostly relied on emergency air medical service (EAMS). This study is to review the role of EAMS by analyzing disaster response in typhoon disaster.
Methods: We analyzed disaster response in Typhoon Morakot, including death toll, number of resident in low-lying areas who were evacuated by ground transfer and EAMS dated Aug 6th to Aug 20th. The results were also compared with that in interhospital transport by EAMS.
Results: 141 people were confirmed dead; 440 were reported missing and 45 were reported wounded. A total of 8910 people were evacuated by air. This is much higher than that in interhospital transfer. This is mainly because ground transport was hampered by drenching rain and mudslided roads. The military was blamed for the delay and not sending in rescue helicopters and personnel properly equipped to save and evacuate the flood-besieged people.
Conclusion: Although the government faced criticism for not having arranged an evacuation as soon as it heard the typhoon was coming, this study demonstrates EAMS plays a even more important role in both interhospital transport and disaster evacuation. Effective use of EAMS can cope with onslaught of disaster on Taiwan.

SY4-03

Injury Prevention: Global Perspectives

Thomas J. Songer
University of Pittsburgh, USA

(More detail will be presented during the talk)

SY4-04

From Injury Prevention to Safety Promotion--Work at Different Levels

Lu Pai
Graduate Institute of Injury Prevention and Control, Taipei Medical University

Injuries have always been major threats to the public's health and well-being. But not until late 20th century, injuries began to be viewed as an important public health problem and injury prevention as one of the priority of pubic health practice. The concept of "injury" has been strongly recommended as an alternative to the term "accident" that injury is a broader concept, consisting of "intentional" and "unintentional" categories. Moreover, the term "accident" has the connotation of unpredictable, uncontrollable or not preventable that can be used as an excuse for not acting to prevent. However, injury is a health outcome. It is not the injury outcome that is intentional or unintentional, but rather the act leading to injury. An accident is an event that results or could result in an injury (WHO 1989). What we should prevent one from is not only the injury but also the event that could, but does not always, lead to injury.
Just like disease prevention, public health approach for injury prevention also has three levels of temporal sequence running from primary, through secondary to tertiary prevention. Primary prevention focuses on the factors involved in increase of risk, secondary prevention focuses on minimizing the extent of injury when a potentially harmful event takes place, and tertiary prevention focuses on reducing the impact of an already established injury. Based on the "energy" theory, one of the best known contributors in this field, William Haddon Jr. proposed ten alternative strategies to hinder harmful energy from coming into contact with individuals (1980). These strategies cover the whole spectrum of the three levels of prevention. However, probably because of putting too much emphasis on "injury", most of the prevention measures focus on secondary and tertiary prevention. Primary prevention to avoid the creation of the hazard in the first place puts emphasis on "safety" promotion. Nowadays, injury prevention and safety promotion are often linked together. Even the title of the world conference has been changed from "World Conference on Injury Prevention and Control" to "World Conference on Injury Prevention and Safety Promotion".

Similar to the definition of health as being "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity", safety can be seen as “a dynamic state or situation of adequate control of physical, material or moral threats and not merely the absence of injuries and threats”. In this sense, “Safety promotion” can be a sustainable movement. To improve safety, the actions can be taken at individual level, group level, organization level, community level, national level and international level. Each has its own role and focus with the possibility of performing at the same time. Actions at community level, which have lead to safe communities, have formed a movement spreading around the world. As more and more communities to join the international safe community network, it is hoped that injury prevention and safety promotion can achieve better results.

Symposium 5- International Cyber University for Health (ICUH)

SY5-01

The International Cyber University for Health: Uniqueness Development and Challenges

Walter Patrick
University of Hawaii, USA

(More detail will be presented during the talk)

SY5-02

Data Mining Approach to the Analysis of Risk Factors for Chronic Diseases among Workers

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1. Health Informatics, Graduate School of Public Health, Institute of Health Services Research, College of Medicine, Yonsei University
2. Korea Industrial Health Association

Objectives: The prevention of chronic diseases among workers is an increasingly important public health issue in Korea because 25% of the entire population is workers and they are rapidly aging as the entire population is becoming older. Accordingly, workplace health promotion (WHP) is becoming an important approach to improving workers’ heath. With the goal of providing information for WHP, this study identified the modifiable (i.e., lifestyle) risk factors for chronic diseases by using data mining method.
Methods: Risk factors were identified by using logistic regression and a decision tree, which is a data mining method for predicting risk factors. In addition, the predictive powers for the two methods were compared to demonstrate the effectiveness of data mining in analyzing a large data set. In the analysis, 293,144 workers in 200 workplaces from the 2007 health examination data were analyzed for two chronic diseases: hypertension and diabetes.
Results: The results showed that smoking and exercise were important factors influencing these chronic diseases. Specifically, smoking, exercise, and age between 45 and 54 were significant factors for hypertension, while smoking, exercise, and job type (office work or production work) were significant factors for diabetes. In contrast to previous studies, decision tree analysis gave more accurate results than logistic regression in predicting hypertension and diabetes.
Conclusion: We conclude that data mining can be a useful analytic tool for predicting chronic diseases. Further, it provides segment-specific information on risk factors to support WHP for the specific target group.

SY5-03

Web-Based Learning in the University of the Ryukyus- A Case Study of International Maternal and Child Health Course in 2009 Spring Semester-

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1. University of the Ryukyus, Okinawa, Japan
2. Yonsei University, Seoul, South Korea

Background: The University of the Ryukyus and International Cyber University for Health (ICUH) within Asia Pacific Academic Consortium for Public Health (APACPH) at Yonsei University made MOU for academic exchange in 2006. The International Maternal and Child Health (IMCH) course has been provided by the faculties of both universities in 2009 spring semester. A case study of the course was carried out to improve the course.
Purpose: To evaluate the effectiveness of web-based distance learning of IMCH course in terms of meeting learning objectives and student satisfaction
To explore the obstacles faced in completing the course
Methods: The data about course participation was collected from function site of web-class. The evaluation on course by 6 Japanese students was carried out when the course ended.
Results: Most students answered that lecture materials were adequate and learning objectives were obtained. However, 2 students who could not attend offline class did not agree that learning effectiveness was better than offline lecture. Main problems for obtaining credit were lack of language competence, active relationship with professors and other students. It was difficult for distant students to attend regular offline classes held at the University of the Ryukyus.
Conclusion: An offline class in each university is useful to provide and confirm sufficient information about ICUH, and IT technical advice. The class also needs supplementary material in Japanese. Systematic student support including these points will be necessary for web-based distant learning especially for distant students.

SY5-04

Public Health Challenges and the APACPH Cyber University

CW Binns[1], MK Lee[2]
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2. School of Health Sciences, Murdoch University, Perth, Australia

Objective: To outline the role of the APACPH Cyber University in public health issues related to new and emerging diseases.
Methodology: A review of public health issues in the region.
Results: The Asia-Pacific Region encompasses around one quarter of the world's population. The health of the people in the Asia-Pacific region has never been better, but there are still many public health challenges that remain. We are now facing new challenges of chronic disease and obesity and emerging infectious diseases. Climate change will bring many new public health issues. Health workers/public health workers are expected to remain abreast of new challenges, maintain public health and deliver high standards of health care. Public health promotes health for all citizens.
Conclusion: The role of APACPH is to promote education and research in our region. The Cyber University has successfully established a postgraduate education role. It also has the potential to explore new media, including cell phones and DVD's to improve public health education.

Symposium 6- Global Health

SY6-01

Global Health and the Epidemiologic Transition

Ronald E. LaPorte
University of Pittsburgh, USA

There is a growing interest in global health world wide with the recognition that is health is "glocal" (global to local). One of the most important theories of global health has not received wide-spread recognition, this is the theory of Omran and the Epidemiologic Transition. The Epidemiologic transition represents the changing patterns of disease and health as countries increase socioeconomic status. It represents the evolution of diseases in populations and world wide. The Epidemiologic transition will be described with the implications of developing and developed countries alike.

SY6-02

Challenges and Needs in Global Health, the VRGH Survey 2008

Peter Chang[1], Vincent Rollet [2]
1. Taipei Medical University, Taiwan
2. Sciences Po Paris, France

Objective: Global health has been a new discipline in public health professionals in Asian Pacific Region, mostly due to traditionally unilateral approaches from the Europe and the North America. The public health professionals have been receivers of the experiences from these areas and seldom contributed to global health significantly. We have been interested in the participation and contribution of global health by health professionals in the region, as compared with those of others.
Methods: A Vital Report on Global Health Survey had been launched online in June 2008 and received responses and comments from more than 400 competent health professionals around the world in 2008.
Results: At least 14 opinions can be identified that reflect independent assessment. In general, more emphasis on global health is recommended by these participants, while both developed and developing countries should pay attention to global health. The WHO is expected to assume a stronger leadership in global health; however some individuals call for the creation on another global health institution. Global health is recognized as an important subject for co-operation among partners at different levels around the world, and is considered to be closely associated with human rights and female empowerment. Key issues within global health include climate change, food supply, and safe water, while key global health injustices include uneven distribution of health resources, scarcity of health professionals, migrant workers in developing countries, and the distortion of heath decisions by politics. Finally, globalization is seen by some to pose adverse consequences for global health, and many consider themselves as the losers of the globalization process. Surprisingly, many participants are not well aware of the MDGs.
Conclusion: Further analysis of the survey is needed, while similar surveillances by civil societies are in great need, as to balance the traditional views by the intergovernmental agencies, as well as the limitation by complicated bureaucratic processes by governmental departments traditionally, and to explore areas where global health programs can be enhanced, including key global partnerships.

SY6-03

The Globalization of Public Health

Linda Rosenstock
MD, MPH, Dean, UCLA School of Public Health, Los Angeles, CA

There is a strong relation between individual medical care and public (or population) health, yet many health systems throughout the world invest disproportionately in individual healthcare (in the U.S., 97% of annual budget on health spent on individual health care) with underinvestment in the prevention of disease and disability and the protection of individuals from unsafe environments, exposures and behavior. In addition, the investment in health research is not targeted efficiently

(also skewed to biomedical advances for individual health care vs. population health) or to conditions of most importance (the "90/l0 problem" where only about 10 percent of research dollars on a global level are directed at conditions that are of most concern for 90% of the world's population).
It is in this context that major challenges exist for building upon the sometimes impressive gains of public health initiatives in the past century. Of greatest concern is inadequate infrastructure (e.g. workforce, laboratory capacity, systems and information technology), coupled with the challenges of globalization and concomitant adverse health risks, including increasing social disparities (the gap between rich and poor), environmental degradation and food security concerns and the emergence and reemergence of threatening microbial diseases. Yet despite the increasingly global nature of health and health status, many developed countries and the U.S. in particular fail to appreciate the importance of investing in the health of all.
Three case studies illustrating the importance of investing in public health and its infrastructure will be presented: 1) efforts to address public health professional workforce shortages in the U.S. and its implications globally 2) the global burden of occupational illness and injury, with particular attention to the health workforce, which is staggering both in terms of human and economic costs and 3) the growing health burden created by a global epidemic of obesity and diabetes. Despite structural and political barriers that often have a common thread across the spectrum of economic development, it is critical for advancing health that targeted investments are made in public health research and health and public health systems improvement.

SY6-04

Current Infectious Disease Challenge and Global Governance

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Objective: There are two objectives of this study. First was to determine the reporting timeliness lag of avian flu and H1N1 in infectious disease global surveillance system, and the limitation of International Health Regulations 2005 (IHR 2005). Second was to analysis the trend and related issues of international regulations and global governance of infectious disease.
Methods: Matched initial avian-related and H1N1 outbreak reports released on WHO Disease Outbreak News and ProMED-mail website from 1996 to July 2009 were collected for quantitative studies. Literature from the international regulations, journal articles, and documents from international agencies (such as World Health Organization) were used for the qualitative studies.
Results: The reporting time gaps of avian flu and H1N1 outbreaks between WHO and ProMED-mail were improved from 17.89 days in 2003 to 3.85 days in 2006 and to 2.91 days in 2009. The reporting timeliness gaps were associated with countries' health civil liberties and human development status. The limitations of IHR 2005 were found from the practice of preventing infectious disease of the international society. In addition, the type of global governance and the role of WHO were changed with the interaction of the global society.
Conclusion: The current infectious disease threat to the world shaped the practice of global surveillance system and raised the issue and needs of global governance.

Symposium 7- New Perspective of Function & Disability

SY7-01

Beyond Diagnosis: Functional Documentation of Disability with the ICF-CY

Rune J. Simeonsson
University of North Carolina at Chapel Hill, & Jönköping University, Sweden

Objectives: 1. Describe the International Classification of Functioning, Disability and Health – Children and Youth (ICF-CY) in the context of the WHO Family of International Classifications
2. Review selected applications of the ICF-CY related to childhood disability
3. Identify implications of the ICF-CY for practice, policy and research
Methods: The publication of the International Classification of Functioning, Disability & Health-Children and Youth -ICF-CY(WHO,2007) offers for the first time, a common language for functional description of disabilities. The ICF-CY formalizes a new paradigm of disablement, in which disability is viewed as the product of person-environment interaction and provides a multi-dimensional framework and taxonomy of Body Functions & Structures, Activities/Participation and Environmental Factors. Documentation of childhood disability on the basis of medical or psychiatric diagnoses has been problematic given substantial variability of functioning within and between diagnoses. There is growing national and international implementation of the ICF-CY as a means to move beyond diagnoses toward functional description of children with disabilities or chronic health conditions served in clinics, schools and other settings. As a universal language of health, functioning and disability, the ICF-CY can be applied in a number of ways to record the profile of children's functional limitations. Clinical applications include: (a) a framework for inter-disciplinary practice; b) differentiated assessment of child functioning; (c) clarification of clinical diagnoses (d) defining the basis for planning individualized interventions; and (e) providing evidence

for documenting outcome. In statistical applications, ICF-CY codes can serve as indicators in (a) population surveys; (b) disability registers; (c) health informatics as well as (d) standardization of variables in research. In terms of policy, the ICF-CY component framework can bring an integrated view of human functioning to the design of standards, laws and policy documents. As new policy and practice initiatives are being implemented around the world, evidence is emerging on the utility of the ICF-CY and ways in which it can contribute to enhanced participation and quality of life of children, youth and adults with disabilities.

SY7-02

Application of ICF in Disability Assessment

Yen-Ho Wang
Chief Physician, Department of Rehabilitation, NTU Hospital, Taipei, Taiwan

Objectives:
1. Introduction current disability assessment system in Taiwan
2. Review the International classification of impairments, disabilities, and handicaps
3. Discuss the application of ICF in disability assessment
Discussion: Taiwan is not one of WHO members, therefore, ICF system is not adopted in Taiwan and only few scholars utilize ICF system for research or teaching purpose. Taiwan Legislative Yuan passed Amendment of Physically and Mentally Disabled Rights Safeguard Law in 2007, and also announced that the evaluation system of disables will follow the spirit of ICF starting from 2012. Currently, international classification of diseases 9th revision, Clinical Modification, ICD-9 CM, is adopted in Taiwan. ICF system is coordinated with International Statistical Classification of Disease and Related Health Problem, Tenth Revision，ICD-10.Therefore, the Bureau of Health Insurance is currently in the process of implementing ICD-10, and modifying missing disease coding in ICD-9. ICD-9 and ICD-10 will be both practiced starting 2012. In ICD system, physicians provide disease categories by diagnosis; in ICF system, physicians, medical workers, social workers and special education teachers form a evaluation team to provide function and disability categories. Therefore, ICD is for disease and diagnosis, and ICF is for health condition categories. The definition according to the fifth article of Amendment of Physically and Mentally Disabled Rights Safeguard Law in 2007 improves the disadvantages of old medical model, that only one or more physicians certify the level of disability. The spirit of ICF is to utilize daily living and future development as subjective evaluation for medical team.

SY7-03

From Assessment to Service Delivery for the Disabled under the ICF System

Wan-I Lin
Department of Social Work, National Taiwan University

This lecture covered three main themes: 1) the historical development of legislation of the Welfare Law for the Disabled in Taiwan since 1980s, 2) how to effectively link need assessment and service delivery for the disabled by the International Classification of Functioning, Disability and Health (ICF) system, and 3) how to respond those challenges faced by the ICF system that will be implemented in 2011.
First of all, the speaker provided a historical perspective of reauthorization issues of the Welfare Law for the Disabled in Taiwan. Secondly, the core values and key concepts of the Protection Act for Rights and Interests of (Physically and Mentally) Disabled Citizens 2007 were introduced. Thirdly, to foster a better understanding of the wide variety of people with disabilities, changing characteristics of the population of Taiwan citizens with disabilities had been highlighted. Fourthly, the speaker well discussed how to redefine the needs of the disabled and scheme a new service delivery system based on the new ICF system. Finally, suggestions for further evaluation and improvement were given to legislators, policymakers and social advocates.

Symposium 8- Oral Health

SY8-01

Global Trends in Oral Health Policy & Prevention Strategies: A Taiwan's Perspective

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Oral health is an integral part of total health. Dental diseases are important public health problems. The reasons for their importance are their high prevalence, the impact on individuals and society in terms of pain, discomfort, social and functional limitation, the effect on the quality of life. Recently, research findings have pointed to the associations between chronic oral infections and diabetes, heart and lung diseases, stroke, and low-birth-weight, premature births.
Some industrialized countries have reduced their mean DMFT caries scores over the past four decades below the very low levels. Yet, oral health disparities still remain in some countries. Most of the developing countries enjoy low to very low prevalence of dental caries, but there remains wide range of experience, some show hardly any perceptible increase, some have moderately elevated DMFT scores in urban communities, others

have large differences between the low rural and high urban scores and some have experienced caries at levels as high as any that have ever been reported. Mostly, oral health services and numbers of personnel are inadequate to deal with the prevailing problem. This stems from a variety of factors bearing on economics, culture, customs, habits and life styles and affecting in different ways of oral health care. The oral health problems of periodontal disease, oral cancer, tobacco use and demographic trends will intensify the needs in the 21st century.
Worldwide, oral health care delivery systems vary greatly. How each system function depends on the particular political, socioeconomic, and culture factors. From the results of the International Collaborative Study of Dental Manpower System in Relation to Oral Health Status Part I. (ICSl) and the International Collaborative Study Part II (ICSII), most countries would benefit by program in (1) nutrition education to lower caries activity (2) water, salt, or milk fluoridation, school-based fluoride programs and home use of fluoride toothpaste (3) education of children and adults to increase and maintain effective oral hygiene practices, along with education about the proper use of dental services, (4) school dental program providing education and treatment (5) expanded-duty auxiliary programs. Experience of the international comparison to date also shows the ICS overturn some generally accepted ideas: (1) oral health status does not seem to depend on the type of personnel or an access to care, (2) care provided in school setting is very effective in the treatment of childhood oral disease but does not appear to improve the oral health of adults in the long term, except when backed up by the instruction of both patients and oral health personnel in prevention technique (3) the most decisive factors for oral health are linked to ability of oral health personnel and governments to promote prevention activities, in other words, facilitating access to care and increasing the number of dentists are not necessarily the best responses in the oral health field.
Facing the coming of 21st century, there new national oral health policies are set up by many countries around the world such as: Healthy People 2010 of U.S.A.; Healthy Japan 21 of Japan; Multi-year Oral Health Plan of PAHO; Australian's 2004-2013 Oral Health Plan etc. In this report I will try to overview some principles and strategies that implicated in these national oral health plans as well as focus on the Taiwan's perspective.

SY8-02

Comprehensive Cancer Control in the US Associated Pacific: Oral Cancer

***Palafox Na*[1], *Buenconsejo-Lum, Le*[1], *Hancock Tw*[2]**
1. John A. Burns School of Medicine, University of Hawaii
2. Yap State Department of Health, Federated States of Micronesia

Oral cancer is increasing in US Associated Micronesia. Many parts of Micronesia are resource (health finance and workforce) limited, geographically isolated. Micronesia has significant risk factors for oral cancer which include betel nut and tobacco use.
Systematically preventing oral cancer in thee areas has not been done and is essential.
Objective: Create and implement a community based, comprehensive cancer prevention and treatment plan which addresses oral cancer through participatory development.
Methods: Engage the Micronesian communities from the US Pacific to develop and implement a comprehensive cancer prevention and treatment plan to include oral cancer. The methodology includes performing a needs assessment to understand cancer burden in each Micronesian jurisdiction, and to develop a local cancer coalition in each community. The community coalition will be provided training regarding cancer prevention, cancer screening, cancer risk reduction, and treatment options. The capacity of the coalition will be built and resourced to develop a comprehensive cancer plan that includes oral cancer.
Results: Local community based, comprehensive cancer prevention and treatment plans have been developed in each of the Micronesian jurisdictions that address oral cancer. These plan are currently under implementation. The plans are resource appropriate and culturally appropriate. A regional Pacific comprehensive cancer plan has also been developed and is currently being implemented.
Conclusion: Oral cancer prevention may be best approached through a community based participatory manner to insure a systematic, culturally appropriate, resource appropriate, sustainable strategy of prevention and treatment. This strategy insures participation of all stakeholders and is likely sustainable.

SY8-03

Studying the Molecular Mechanism(s) of Oral Cancer Metastasis

***Yen-Chun G. Liu*[1], *Yan-Hsiung Wang*[1], *Yu-Guan Chen*[2], *Li-Min Lin*[2], *Tien-Yu Shieh*[1], *Yen-Tung A. Teng*[1 3]**
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Oral squamous cell carcinoma (OSCC) constitutes the most common (>90%) cancer in oral cavity and head & neck regions, and has recently become the fastest arising malignant tumors and hence ranked the 4th amongst the top-10 most-deadly cancers in Taiwan since 2006 where betel quit (BQ) is a known natural carcinogen for OSCC.

At the time of diagnosis, OSCC is often accompanied by local (i.e., jaw bone) invasion or/and systemic metastasis (i.e., cervical lymph nodes, etc.) that results in very poor treatment outcomes and patients survival (5-year death rate >50%), which has a significant impact on the health care system and a financial burden to our society. Our lab has previously shown the development of functional osteoclasts (OC) derived from $CD11c^+$ dendritic cells (DC) in response to RANKL (receptor activator of NF-κB ligand) and pathogen *Aggregatibacter actinomycetemcomitans* and proposed a direct role for DC as OC precursors during inflammation-induced osteoclastogenesis (DDOC: dendritic cell-derived osteoclast). Recently, we provided further molecular evidence that SOCS3 (family of Suppressor Of Cytokine Signaling) signaling are critically involved in developing DDOC for inflammation-induced bone loss. Objective: Herein, we proposed to study the signaling mechanisms of the critical molecules/genes that underlie the development for OSCC metastasis during which DDOC mediates or modulates RANKL/OPG interaction for osteoclastogenesis and bone destruction. Methods: We screened to identify candidate genes for OSCC metastasis by employing specific high-throughput genomic & shot-gun proteomic platforms using tissue samples from BQ chewer with OSCC (with or without metathesis; N=30/group). In addition, we assessed clinical correlation of serum & local OC activation vs. inhibition markers: RANKL & OPG (osteoprotegerin) for their ratios in relation to the prognostication of the diagnosed vs. post-treatment adult OSCC patients >21 years old, with which RANKL, RANK and OPG expression levels are also assessed for their potential association with OSCC metastasis. Results: Our initial genomic screening had lead to identifying several BQ-associated genes/enzymes for metabolic and inflammatory changes in the hosts (i.e., ACE, Resistin, Visfatin, CYP2J2, CYP2A6, CYP2A13, GST, etc.). Functional proteomics are underway to assess and measure the mRNA & protein expression levels of ABCA1, Resistin, and Visfatin for relationships with OSCC metastasis and elucidating the possible molecular mechanism(s). Furthermore, there are significant increased RANKL & RANK in all OSCC samples analyzed, but not so in normal oral mucosal/epithelial cells. In parallel, OPG is minimally expressed or un-detected in OSCC cancer cells. Based on the real-time PCR and FACS or immunohistochemistry, it is found that a significant up-regulation of TGF-βRII expression ($p<0.03$) is consistently associated with development of DDOC at the fore-front of OSCC-mesenchymal interface in most of the tissues from metastatic tumors studied. Conclusion: Our present findings suggest that: i) critical signaling molecules involving changes associated with cellular metabolism or/and inflammation may affect OSCC metastasis *in vivo*; ii) RANKL & OPG may be useful biomarkers that implement the prognosis in OSCC patients clinically once fully established; and iii) TGF-βII signaling is a critical factor not only on DDOC development for inflammation-induced bone-loss not also on OSCC-mesenchymal interactions during metastasis. The present study was supported by University of Rochester, Kaohsiung Medical University & University-affiliated Hospital, NIH-DE018356-&-DE-015786, USA and NHRI-Taiwan, R.O.C.

SY8-04

Formulation of Prevention Policy and Strategies for Managing Oral Diseases in Japan

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1. Healthy Japan 21 and its interim evaluation
In 2000, a new strategy called “Healthy Japan 21” was implemented. This is a comprehensive health promotion strategy for the 21st century including 13 oral health items. This, “strategy”, is one in a series of National Health Promotion Programs that started in 1978 in accordance with the Alma Ata Declaration (WHO, 1978). In 2006, an interim evaluation was made of the Healthy Japan 21 program. Three items of oral health were cleared including an increase in the proportion of persons who have more than 20 teeth at the age of 80, people who undergo regular teeth cleaning and those who receive regular dental check-up.
2. 8020 campaign and recent 8020 studies
The 8020 campaign, ‘retaining more than 20 teeth at the age of 80’, started in 1989 in Japan. Several epidemiological surveys concerning the health status of 8020 achievements have been carried out across Japan
3.Salutogenesis and oral health.
The 8020 epidemiological surveys have been undertaken by the salutogenesis, using 8020 as case subjects and those without 20 teeth remaining in their mouth at 80 as controls.
4, Common risk/health factor approach and oral health
The common risk-factor approach is a contemporary understanding of the social determinants of health. It provides a basis for an integrated approach to preventing a range of conditions (Sheiham et al. 2000). Diet, smoking, alcohol, injury, hygiene, stress, exercise are linked with a wide range of important diseases. Altering these factors will reduce the risks of these systemic conditions as well as reducing oral disease.
5, Life-coarse study and oral health
Biological risk interacts with economic, social, and psychological factors in the development of chronic disease throughout the entire course of life (Kue et al., 1997). The 8020 survey shows that 8020 achievers have a tendency toward a strict upbringing, having no swollen gingival, early visits to dentists and being fond of sweets in their childhood.
6, Inequality of oral health
The epidemiology of oral diseases reveals that disease levels vary greatly across socio-economic group. There

were gradients in dental caries, periodontal status and retaining more than 20 teeth according to job classification.
7, Social capital and oral health
Oral health, such as the dental caries free rate and the DMFT Index, relates to social capital which is defined as a 'feature of social organization, such as civic participation, norms of reciprocity and trust in others that facilitate cooperation of mutual benefit' (Putnum, 2000). Adopting integrated and sociological approaches to the promotion of oral health are important in the formulation of prevention policy and strategies managing oral diseases in Japan.

Symposium 9- Social Determinants of Health I

SY9-01

Genetic and Environmental Determinants of Diabetes

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Diabetes mellitus is a heterogeneous group of disorders characterized by persistent hyperglycemia. The two most common forms of the disease are type 1 diabetes (T1D, previously known as insulin-dependent diabetes or IDDM) and type 2 diabetes (T2D, previously known as noninsulin-dependent diabetes or NIDDM). Both are caused by a combination of genetic and environmental risk factors. However, there are other rare forms of diabetes that are directly inherited. These include maturity onset diabetes of the young (MODY) and diabetes due to mutations in mitochondrial DNA. At the present time, the only form of diabetes that can be prevented is T2D. Although environmental factors such as viruses, infant nutrition and hygiene are known to play a role in the development of T1D, they are, in general, non-modifiable, even among individuals at high genetic risk based polymorphisms in the HLA region of chromosome 6, the insulin gene or CTLA-4. In contrast, the major environmental risk factors for T2D are obesity ($\geq$120% ideal body weight or a body mass index $\geq$30 kg/m^3) and a sedentary lifestyle. Therefore, T2D can typically be prevented by maintaining an age-appropriate body weight and engaging in physical activity. Although public health messages that emphasize a nutritious dies and regular exercise are now common place, they have not been effective in terms of disease prevention. Given the recent obesity epidemic, it is obvious that current intervention strategies are being ignored by a significant portion of the general population. Leaders in the Human Genome Project predict that genetic tests will soon be available for disorders such as T2D, permitting persons to 'learn their individual susceptibilities and to take steps to reduce their risk by increased medical surveillance, lifestyle modifications, diet or drug therapy'. T2D does have a strong genetic component. Studies of monozygotic twins revealed concordance rates that range from 60% to 90%, which are significantly higher than those for dizygotic twins. Whether or not predictive genetic testing will provide the necessary incentive to make changes in one's lifestyle is unclear, and there are several reasons to be pessimistic, such as the limited utility of genetic tests, inappropriate interpretation of the results, potential distress and insurance and employment discrimination. This presentation will include an update on the genetic and environmental determinants of diabetes and address current and future challenges for patients and clinicians.

SY9-02

Changes in Work Conditions and Social Inequalities in Stress-related Health Problems: Empirical Evidences from Taiwan

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Objectives: Epidemiologic evidences from Western countries indicate that psychosocial risk factors at work play an important role in contributing to the social gradient in ill health. A number of diseases or illnesses have been related to work stress, most notably cardiovascular diseases, musculoskeletal disorders, burnout, fatigue syndromes and mental illnesses. In Taiwan, due to economic downturn and labor restructuring, the overall work conditions have been deteriorating and workers' perceived levels of job stress and job insecurity have increased substantially. Stress-related health problems have become a major public health concern, and issues on the recognition, compensation, and prevention of stress-related health problems have also been the center of controversy in labor affairs. In this report, we summarize empirical evidences from a series of epidemiologic surveys, and present the social distributions of major job stressors and stress-related heath outcomes, as well as the associations of psychosocial job stressors with health outcomes.
Methods: A series of national surveys of representative paid employees were conducted every 3 years since 1994 by the Council of Labor Affairs, and information on occupational status, working hours, psychosocial risk factors, burnout status, and self-rated health status was obtained by standardized questionnaires.
Results: Despite that employees with higher employment grades perceived a higher level of job stress, unfavorable work conditions, including long working hours, lower job control, poor employment security and lower workplace justice, were more prevalent among those with lower employment grades. Employees with lower employment grades also reported poor health and lower job satisfaction. Perceived importance of major job stressors and their associations with health outcomes also differed substantially across employment grades and gender.
Conclusions: This study indicated that there were social inequalities in work quality and health, and the patterns

of job stressors and their influences on health varied by employment grade and gender.

SY9-03

Global Health Equity and Climate Stabilization through Action on the Social Determinants of Health– A Research and Policy Agenda

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[2]*The National Centre for Epidemiology and Population Health, Australian National University*

Pivotal to the goal that all people, now and in the future, have the chance to lead healthy and flourishing lives is the need for a stable Earth system and a fair distribution of societal resources, both being dependent on politics and policy at global, national and local levels. Key elements of the modern, increasingly globalised, world – asymmetric economic growth, unequal improvements in daily living conditions, unequal distribution of technical developments and continued suppression of human rights in many places – have, arguably, widened global health inequities. The realms of politics, structures, governance and economic and social policies generate and distribute power, income, goods and services, both globally and nationally, and mostly unequally. This results in inequities in the immediate circumstances of peoples' lives and ultimately their health. Meanwhile, the same suite of characteristics of modern society and the global economy, allied with their unprecedented scale, have also seriously perturbed the Earth system, including its climate system. These are the great systems that sustain life, including human life. To induce significant changes in the global climate is to jeopardise the health of present and future generations. The combined impact of the increasing double burden of non-communicable and communicable diseases, economic instability, and environmental degradation is challenging people, nations and institutions in a way never experienced before. Each of these problems has social origins and, generally, impact more on those lower down the social hierarchy. Putting these inequities in population and planetary health right requires evidence for action. In high income countries, and more so in low and middle income countries, the problems of daily life, and their impact on health inequities, are plain to see but the research base is inadequate. There is relatively good research on disease control strategies, including behaviours, and increasingly on health systems, but little research on the underlying social and economic causes. The underlying determinants of health inequity and of environmental change appear to overlap substantially but there is little research that interfaces climate change, social conditions and health equity.
Today's global interconnectedness and inter-dependence enable the social and environmental determinants of health to be addressed in ways that will increase health equity, reduce poverty and disease burdens, and build societies that live within environmental limits. This paper describes a systems-based approach, both in terms of research and action, to population and planetary health equity.
This paper draws on Sharon Friel's involvement in the WHO Commission on Social Determinants of Health.

SY9-04

Epidemiology of Cardiovascular Diseases, Genes, Environment, and Management

Yong-Hua Hu
Peking University, China

(More detail will be presented during the talk)

Symposium 10- Safe Community

SY10-01

What Do We Do for Safety Promotion and Injury Prevention in Community Level?

Nam-Soo Park
Dept. of Health Management, Hyupsung University, Korea

Objective: To introduce and share the experiences and lessons from community safety promotion and injury prevention project using International Safe Community model
Methods: An explanatory study of structure, process and outcome related to International safe community programs in Asia region by literature review
Results: Critical success factors and barriers for international safe community are followings: understanding on the concept of injury and safety and its necessity, active participation, identification of problem and risk factors, effective and comprehensive approach for intervention, infrastructure for implementation, evaluation on program impact and management, and assure the sustainability.
Conclusion: For safety promotion and injury prevention in community level, all programs are needed to be tailored to its own community with scientific evidence. International safe community model is very useful to settle the framework for successful implementation within community, which are focused on the empowerment of community itself as well as citizens.

SY10-02

Child and Adolescent Injury Prevention: From Policy to Action

Yingwei Wang
Tzuchi University, Taiwan

Objective: To understand the problem and the intervention strategy of childhood and adolescent injury in Taiwan
Methods: This report uses data from the National Vital Statistics and recent research articles of childhood injury

in Taiwan. We also carried deep interviews with key informants from both government and non-government organization to study the present injury prevention strategies in childhood and adolescent.
Results: Unintentional injuries are the leading cause of morbidity and mortality among children in the Taiwan. In 2008, the death related to injury between year 1-14 y/o was 24-27% of all death in that age group. However, the proportion increased to 54% in 15-19 y/o adolescent. This result was caused by transportation-related injuries and was much higher than most of the other developed countries. Unintentional injuries related to drowning, falls, burns, poisoning, and suffocation shared the similar rate with other developed countries. Different departments from central government are responsible for the policy and implementation of injury prevention program. There was only limit collaboration between these departments.
Conclusion: According to the suggestion from Bangkok Charta (WHO 2005), partnership development is most important in policy level for successfully implement intervention program in the country. A comprehensive collaboration model should be developed to decrease the incidence of childhood and adolescent injury in Taiwan.

SY10-03

Challenge of "Safe Elderly" with the Aspect of Public Health

Yoko Shiraishi
Mature Life Institute/Ritsumeikan University

Objective: Japan has the longest average life expectancy as 83 years old in the world. But longer life doesn't always means happier life. The time we gain is added only to the last part of the life cycle. Therefore, to enjoy the extended old age, people become more conscious about health and put effort on preventing to be sick to keep good quality of our life (QOL) throughout their lives. Besides, people also become to realize the importance of injury prevention at old age, since injuries ruin their health and well-being as well. Therefore, today, from individual to governments, various efforts are seen to prevent injuries and promote safety in the senior's daily lives.
As one of models which prevent injury and promotes safety in our living conditions, a strategy of "Safe Community" was introduced into Japan with many years of experience in the world few years ago. Kameoka City, Kyoto Prefecture in Japan, adopted the model of Safe Community and put emphasis on safety promotion of seniors, as one of top priorities under the increase of aging population.
Based on the background above, this study aims to see how the approach of Safe Community has effected on health and well-being of senior citizens in Kameoka City, the first designated Safe Community in Japan.
Methods: To grasp overview of strategies of safety promotion for the elderly based on the framework of Safe Community, two years of participant observation research was conducted at a pilot area, Shino-Cho, in Kameoka City. Then, to see effect of the strategies, questionnaire survey was conducted to all households in the pilot area.
Results: From the observation, it was found that Shino-Cho set up the Senior Safety as one of the top priority as well as Children's Safety and Traffic Safety. It utilized existing programs and developed new programs only when existing programs don't cover residents' needs. Activate communication among residents is always emphasized. By analyzing the results of the questionnaires, it is revealed that more people become to feel safe and comfortable with their life in the community after introducing Safe Community programs.
Conclusion: By introducing the model of Safe Community, residents become more aware of importance of safety promotion for injury prevention keep good health and well-being. The Safe Elderly program has brought up QOL of residents in terms of improvement of satisfaction with their lives, and subjective safety which can be understood as feeling of safe. As the next goal, effect on objective safety including reducing people in bad health should be examined after another few years of operation.

SY10-04

Need for More Economic Analysis of 'Safe Communities': Should Taiwan Lead the Front!

Koustuv Dalal, MSc, PGHRM, PhD
Editor, WHO Safe Community Monthly, WHO CCCSP & Senior Health Economist
Centre for Medical Technology Assessment, Social Medicine and Public Health Sciences Linkoping University, Sweden.

Injuries are expensive. A long term projection of burden of disease and injuries demonstrates multi-fold increase of injuries in low and middle income countries affecting poor families more, including children and economically productive members. Injuries have several individual and socioeconomic consequences. Victims of violence and injuries from poor strata of the society lose more health and economy, produce less and eventually enter in to the 'medical-poverty trap'. In cases of moderate and severe injuries the victims need immediate treatment - most of the time at the emergency cares with higher cost burden. However, the policy makers are not paying due attention in most of the low and middle income countries towards injury prevention though ninety percent of the injury deaths are occurring in those countries. Therefore, like some widely-mentioned disease (Malaria, TB, HIV etc.) injuries should also be treated as serious problems for peoples' health and economic development.
A review of 12 studies mainly from OECD countries provides an average figure of 3536USD (SD 772) per injury case with two third shares of indirect costs. For non-hospitalized injury cases average total cost was 1252

USD while for hospitalized injury cases average total cost was 33295 USD. Though the above figures are rough estimates but country specific data can indicate that the burden of injuries is really high especially in the low and middle income countries.
Evidence suggests that Safe Communities program is effective in reducing injuries. The incidence of minor injuries treated in health care was decreased by 41% in all ages and injury event environments. Safe Communities program over the periods has evidenced to reduce total number of bed days due to injuries at emergency care by 39%. Another study indicates that in the Safe Community intervention areas the injuries with health care treatment were reduced by 15%.
As far as the economic issues are concerned, Safe Communities program is really cost-effective. In Sweden the costs of injuries in a societal perspective decreased from 15 million USD (current price) to 12.32 million USD, while the cost for Safe Community program intervention was estimated at approximately 1.3 million USD in a small community. Another rough estimation indicates that cost: benefit ratio of Safe Communities program is 1:10 for injury prevention activities, mainly in the high income countries.
Therefore we can conclude that Safe Communities program is successful to reduce injuries requiring health care in a cost effective way. Even the money saved through injury prevention can be utilized in other development activities. However, existing economic literatures of Safe Communities are from rich countries of Scandinavian and Pacific nations. To better judge the economic effectiveness of the safe Communities program we need more and more economic studies from low and middle income countries which constitutes majority of the populations and injury figures.
Policy makers more believe in monetary gains and economic figures. If we consistently exhibit the economic gain of Safe Communities then the policy makers will be more and more interested for higher investment and we will better gain the success towards the WHO Safe Communities manifesto. Taiwan is leading the Safe Communities program in the region, we expect that it'll also initiate studies of economic effectiveness within near future and lead the economic front of the Safe Communities movement, especially for the low and middle income countries.

Symposium 11- Joint Program with The Association of Schools of Public Health in the European Region (ASPHER) Joint Summit-AAA

SY11-01
Perspective from ASPHER
Antoine Flahault
EHESP, School of Public Health, France

(More detail will be presented during the talk)

SY11-02
Industrial Risks as Criminal Acts: the Case of Asbestos Lawsuits in Europe and Japan
Paul Jobin
CEFC, Taipei Office

Objective: What is the impact on public health policies of lawsuits launched by the victims of industrial pollution?
Methods: To answer that question, asbestos lawsuits are studied here as an archetype for both occupational and environmental hazards and through cross-border comparisons. This paper is based on a sociological fieldwork conducted in Japan (11/2008, 3/2009, 6-7/2009) and France (1/2008, 9/2009). It is sponsored by ANR and JSPS (French and Japanese equivalents of NSC) within a multidisciplinary research program untitled "*Silicosis and Asbestos Related Diseases in France and Japan; history, sociology, spatial mapping, epidemiology, ethics*", coordinated by Tsuyoshi Matsuda (University of Kôbe) and myself. This program involves 12 senior and junior researchers from France and Japan. My own fieldwork focuses on the analysis of one specific trial in Sennan (Osaka) against the Japanese state through interviews of lawyers, plaintiffs, public officers and analysis of the archives (3 *giga* of electronic memory at present). Besides, I made also interviews of Japanese, French, Italian and Belgium lawyers.
Results: The first trials of asbestos victims started in the USA in the 1970s. Thanks to the huge population of American lawyers in search of opportunities, more than 700 000 asbestos related cases have been indicted and prosecuted so far, provoking the collapse of around 70 asbestos companies before they could turn to other industrial activities, while the consumption of asbestos almost disappeared. However the plaintiffs only received 30 billions US$ compared to the 40 billions earned by their lawyers. And so far American Federal State has not formally banned the use of asbestos. In comparison, in Europe, the number of lawsuits is much less important. Despite late decisions in the case of France, Italy, Spain and Greece, a consensus has been reached for a general ban of asbestos. When polluters were indicted, the victims did get much better consolation payment compared to American plaintiffs, or compared to the compensation they can get through the insurance scheme for occupational hazards or through the specific public founds established in France and Belgium. Asbestos related lawsuits have concentrated the anger of an important social mobilization that drained attention on public and business responsibility for occupational and environmental hazards. The majority of those lawsuits are launched at civil courts, but some criminal suits have also been indicted against business managers in France and Italy. In Torino (Italy), around 2000 occupational and environmental victims sued the general managers of the Swiss and Belgium company Eternit, one of the biggest and still very lucrative asbestos company in the world.

Japan presents a situation quite similar to Western Europe but with differences worth to study. Japan has banned asbestos in 2004, almost ten years after France (1996). Despite the limited total number of lawsuits (around 40), asbestos has become an important social issue widely debated that has generated a new law for compensation. More interestingly, a medium scale lawsuit has been engaged against the state. The 35 plaintiffs used to work in textile asbestos of very small scale in Sennan, the southern suburbs of Osaka, and birthplace of asbestos industry in Japan. As the companies have closed years ago, instead, they sued the state as they found out that the ministry of Health had conducted epidemiological surveys as soon as 1938. Although the results of this survey were very alarming, the public officers decided not to engage any preventive measure.
Conclusion: Through the case of asbestos, it appears that lawsuits sued by the victims of industrial pollution do have an impact on public health policies, especially when public officials or company managers may be indicted with criminal charges. However, countries like Canada, India, Pakistan, Kazakhstan, Russia and China continue to promote the "safe use" of chrysotile (white asbestos). In those countries, and many other developing countries, the consumption is still increasing. Such a trend puts a major threat on the public health agenda for the years to come and at global level. Except Japan, Korea and Taiwan, Asian countries absorb half of the world production of asbestos. China ranks first for consumption, and number three for production. This means a threat not only for China itself but also for other countries like Taiwan where China exports massively its products (the threat concerns in particular the monitoring of imported construction materials).

SY11-03

Risk Perception and Vaccination Iintention against Swine-origin Influenza A H1N1 in the French Population

Michel Setbon
CNRS and EHESP

Since the emergence of the novel swine-origin influenza A H1N1 the growing number of cases observed worldwide had set off the implementation of programs planned to contain and mitigate what was now defined as a pandemic influenza. Consequently, all countries are trying to combine pharmaceutical and non-pharmaceutical measures to reduce the risk of a large scale epidemic. Among the former, the development of a vaccine expected to be operational on the end of October 2009, represents for health authorities of several countries the main efficient strategy to reduce the attack rate and the severe consequences associated with. In France, decision was taken on September 2009 to propose the future vaccine to the entire population. But even if the amount of vaccine will be available timely, the effectiveness of the vaccination campaign largely rests on the willingness of individuals to be vaccinated against the swine flu. The proportion of the population who would get the vaccine, its profile and the factors that determine vaccination intention represent questions of crucial interest, able to improve the success of the campaign and finally to reduce the size of the epidemic. A survey was realized on June 2009 on a representative sample of the French population (n = 1000) in order to investigate the determinants of protective behaviour and specially of vaccination intention. Based on a questionnaire grounded on main theoretical models of risk perception and illness representations, significant correlations were seeking through bivariate and multivariate analyses. Two models were developed: the first based on variables related to risk perception, the second introducing the experience of seasonal flu, through the variables "having experienced seasonal flu and previous seasonal flu vaccination ". In the final logistic regression analyse two major variables had been found significantly correlated with vaccination intention: worry related to the risk of getting swine-flu and previous experience of seasonal flu vaccination. As more than 60% had never vaccinated against the seasonal flu great concerns arise concerning the effectiveness of campaign of vaccination against swine-flu. Consequently, to increase the rate of the French population who will get the new vaccine, new targeted risk communication programs are needed.

SY11-04

Perspective from APACPH

Wen-Ta Chiu
Taipei Medical University, Taiwan

(More detail will be presented during the talk)

Symposium 12- Panel Discussion (Oral Cancer)

SY12-01

The Pathological Basis and the Role of Oral Pathologist in Prevention of Oral Cancer

Professor E. A. Prasad D. Amaratunga
Faculty of Dental Sciences, University of Peradeniya, Sri Lanka

Oral Pathologist plays a major role in the management of patients with Oral Cancer. Although the main involvement of the Oral Pathologist is in the definitive histopathological diagnosis of the Oral Cancer, pathologist has to play a significant role in prevention of Oral Cancer at the level of primary, secondary and tertiary prevention.
Sound knowledge on pathogenesis and pathology is necessary in order to design a preventive programme for any disease. Such programmes are best designed by community experts working as a team with pathologists and clinicians. In case of Potentially Malignant Oral Lesions, knowledge about "people at risk – lesions at risk – sites at risk" and its pathological basis would enable focusing on high-risk cases than screening entire

population. Oral Carcinogenesis is a multi stage process involving changes such as initiation, promotion and progression of the potential cells. Habit intervention before the stages of irreversible cell damage would prevent the potential cells from progressing into a malignant neoplasm.
Prediction of prognosis of potentially malignant oral lesions is mainly based on histopathological features. Although histopathological grading of dysplasia has a positive correlation to the risk of malignant transformation of potentially malignant lesions, early recognition of those lesions that would eventually undergo malignant transformation has still been proven to be difficult. Similarly, well-differentiated carcinomas are generally known to have a better prognosis than poorly or undifferentiated carcinomas. Further, the Clearance of tumour margins, depth of invasion, vascular and nerve involvement, lymph node metastasis and pericapsular spread from the lymph nodes bear tremendous importance in prognostic prediction. Such information would be essential for the clinician for planning appropriate treatment and prevent progression of disease at secondary and tertiary levels.

SY12-02

KLK6/KLK7/KLK10 Genes of Oral Squamous Cell Carcinoma

Tien-Yu Shieh
Kaohsiung Medical University, Taiwan

Objectives: According to Health Statistics of Department of Health in 2007, the mortality of oral cancer in Taiwan has ranked sixth cancer in the entire population.
Our aim is to investigate the association between KLK6/KLK7/KLK10 expressions and oral squamous cell carcinoma (OSCC).
Methods: Between October, 2007 and April, 2009, oral precancerous and cancerous patients were recruited from the Department of Oral and Maxillofacial Surgery and Pathology, Kaohsiung Medical University Hospital, Taiwan. Health controls were recruited from OSCC survey in a southern Taiwan community. After getting the inform consent, 10ml peripheral blood were collected for plasma and DNA extraction. Protein levels were determined using ELISA. JMP statistical software was used to analyze the association.
Results: Sixty-one oral precancer patients, 67 OSCC patients and 30 health controls were recruited in the present study. Table 2 was the demographic data of OSCC, OPL, and health control participants. The mean age in OSCC, OPL, and health control were 52.53, 50.32, 48.43 years, respectively. In these data, all participants were all males, and they had habits of cigarette smoking, betel quid chewing, and alcohol drinking. Protein level data are presented in table 3. KLK6 and 7 protein levels in oral diseases had been trending upper than in health control. KLK6 protein concentration was significantly different between OSCC, oral precancer, and control (p=0.0178).We used median in control group protein concentration be a cut point and separate protein level be two groups. Logistic regression analysis showed that the risk of KLK10 higher than 8.25 ng/ml was 2.53 (95 %CI, 1.04-6.23) for OSCC development from health control. Furthermore, there was a significant correlation between KLK6 and KLK7 protein expression level and the clinical stage of OSCC ($p = 0.048$, $p = 0.0294$, respectively).
Conclusion: We suggest that KLK6, 7, and 10 protein level are associated with an increased risk of the occurrence of oral cancer. Moreover, we observed KLK6 and KLK7 protein level may associated with oral cancer stage. However, further studies are required to clarify the association of these genes with OSCC in other populations.

SY12-03

Practical Technique of Screening for Oral Cancer

Liang-Jiunn Hahn
National Taiwan University School of Dentistry

The author will present a practical and correct technique of screening for oral cancer. The traditional and common method of screening for oral cancer in Taiwan is as follows:
The examiner and the person who is examined sit face to face on 2 chairs, and the examiner use only 1 or 2 disposable tongue depressors to examine the limited "oral mucosa" of that person. Such a method is prone to cause false negative results, so we had better abandon such practice.
The method used by the author is following:
Let the person who undergoes examination takes a supine position on a special flexible examination chair, the examiner sit at 7-11 o'clock position of his head, and examine his oral mucosa by inspection and palpation, using 2 mouth mirrors in definite order of the sites examined. By such technique, the screening of oral cancer can be performed efficiently and correctly, avoiding to cause false negative results, which is the most important concern in screening for oral cancer.

SY12-04

How to Improve the Efficiency of Oral Cancer Screening-the Experience from the Special Clinic for Betel Quid Chewing Related Diseases

Hsin-Ming Chen
School of Dentistry, National Taiwan University
Department of Dentistry, Division of Oral and Maxillofacial Surgery, National Taiwan University Hospital

Objective: Oral cancer is the sixth leading cancer in Taiwan, which makes it as one of the important public issues in this country. For the best strategy to increase the five-year survival rate of oral cancer being early diagnosis and treatment, therefore, how to improve the

efficiency of oral cancer screening is the most urgent event here.
Methods: The data was collected from the special clinic for betel quid chewing related diseases in National Taiwan University Hospital, which was established in December 3, 2000. Descriptive statistic was used to analyze those data.
Results: From 2004 to August 2009, 6213 person in time were recruited. The annual number of person in time increased by year proceeding. There are 102 diseases listed, the top-five diseases are leukoplakia (45.77%), oral malignant diseases (9.32%), lichen planus (7.26%), other disturbances of oral epithelium (7.11%) and glossitis (5.6%). Most of them related to betel quid chewing. Among leukoplakia, there are 302 persons, 19 persons (6.29%) developed to have oral malignant diseases during treatment.
Conclusion: Special clinic for betel quid chewing related diseases supply the good and convenient platform for persons chewing betel quid to get early diagnosis and treatment, who had the potential malignant disorders and oral malignant diseases. It also gave the opportunity for persons with the potential malignant disorder to find the malignant transformation of their disorder early. All improve the efficiency of oral cancer screening.

SY12-05

Chemical Carcinogenesis of Betel Quid in Taiwan

Jiiang-Huei Jeng*, *Liang-Jiunn Hahn
Graduate Institute of Clinical Dentistry and Department of Dentistry, National Taiwan University Hospital and National Taiwan University Medical College

Betel quid (BQ) chewing was the main etiologic factor of oral submucous fibrosis (OSF) and oral cancer in Taiwan, India and many other countries. In the multi-step chemical carcinogenesis, BQ ingredients such as arecoline, arecaidine, safrole etc. are found to be the potential carcinogens due to their cytotoxicity, mutagenicity and genotoxicity. In addition, the production of reactive oxygen species (ROS) and areca nut-specific nitrosamines during BQ chewing may also contribute to the diseased processes. All these toxic species may involve in the initiation, promotion and progression of oral cancer by induction of gene mutation, chromosomal aberration, deregulation of cell cycle control, alteration of gene expression as well as affecting the cellular signal transduction. BQ components, such as areca nut extract, arecoline, arecaidine, catechin and copper, may also affect the collagen phagocytosis, metalloproteinases (MMPs), tissue inhibitor metalloproteinases (TIMPs), plasminogen activator inhibitor (PAI-I) and lysyl oxidase expression, collagen turnover, proliferation and the contraction of buccal mucosa fibroblasts as well as the induction of tissue inflammation, leading to occurrence of OSF. These results indicate that BQ chewing is an important etiologic factor of oral cancer and OSF. Chemical components in the BQ and their metabolic products are possible carcinogenic and fibrotic factors. Understanding the mechanisms responsible for toxicity of BQ ingredients may highlight our future prevention and treatment of BQ-chewing related oral mucosal diseases

SY12-06

Effects of Betel Quid Component on the Hamster Urinary Metabolome of Cigarette Containing Carcinogen, 4-(Methylnitrosamino)-1-(3-pyridyl)-1-Butanone in Hamster

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Objective: The tobacco-specific nitrosamine 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) is a documented human carcinogen. We have previously shown that safrole, a major betel quid component, induced hamster hepatic CYP2As activity, which modulated NNK metabolism as evidenced by reduced urinary 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) formation. This study evaluated the synergist potential of safrole on NNK metabolism by metabolomic approach.
Methods: Male hamsters received a single administration of safrole (1 mg/kg) or an equal volume of corn oil (vehicle control) by oral gavage nine days prior to buccal painting of NNK (1 mg/kg). Urinary metabolomic profiles were determined by liquid chromatography/quadrupole time-of-flight mass spectrometry (LC/QTOF-MS) in 24-h urine after NNK treatment. The acquired LC-MS data were extracted with the Agilent MassHunter Qualitative software. Multivariate data analysis was performed with GeneSpring MS software. Finally, the concentration of selected compounds in urine was calculated using HPLC triple quadruple mass (MS/MS) spectrometry. Results: NNAL, NNAL-glucuronide, NNAL-N-oxide, NNK-N-oxide, 4-(3-pyridyl)-4-hydroxybutanoic acid (HBA) and 4-(3-pyridyl)-4-hydroxybutanoic acid (OBA) were identified, together with a number of unidentified compounds. The results revealed the increased formation of NNK-N-oxide and NNAL-N-oxide in safrole/NNK group, and this reflected the increased activity of pyridine N-oxidation of NNK and NNAL. The underlying mechanism and the meaning of this pathway remain elusive and warrant further study. Safrole pretreatment also enhanced the urinary HBA and OBA formation, which indicated the metabolic activation of NNK.
The ratios of HBA/total NNAL and OBA/total NNAL represent the activation indices of NNK, and their values in safrole-pretreated and control groups were 4.06 vs 2.74 and 5.04 vs. 2.94, respectively. On the other hands,

the detoxification index of NNK, ratio of NNAL-glucuronides/free NNAL, was significantly decreased in safrole-pretreated group (p=0.024). Conclusion: By using Q-TOF and MS/MS spectrometry, we have demonstrated safrole modulated the activation of NNK in vivo.

SY12-07

Mechanisms of Metastasis in Betel Quit (BQ)-associated Oral Squamous Cell Carcinomas

Prof. Andy Y-T. Teng
Kaohsiung Medical University, Taiwan

Betal Quit (BQ)-associated oral squamous cell carcinoma (OSCC) is, in principle, a deadly oral malignancy among all head & neck cancers, but also features unique clinical characteristics with etiology that signifies its special biological & epidemiological manifestations in southern Taiwan. We addressed to investigate the unique histo-pathological and potential mechanisms of BQ-associated OSCC in human vs. animal models via the genomics and shotgun proteomics. Herein, the discussion will be focused to reveal the underlying cellular and molecular interactions associated metabolic pathways that concur during BQ-related metastatic spread locally and systemically.

SY12-08

Reduction or Block Carcinogenesis of Betel Related Oral Submucous Fibrosis and Oral Cancer

Shang-Lun Chiang[1], Ying-Chin Ko[12]
1. Graduate Institute of Medicine;
2. Center of Excellent for Environmental Medicine, Kaohsiung Medical University

Objective: The previous findings of toxicogenomics affirmed us with new direction in studying the pathogenesis and prevention of betel quid/areca nut-induced oral precancerous lesions and oral cancer. Here, we undertake chemopreventive research program to find out whether we can control the disease occurrence by blocking or reducing the carcinogenic effects from ready-to-use clinical drugs.
Methods: The microarray, pathway analysis, and qRT-PCR were performed to identify susceptibility genes and novel mechanisms accounting for betel quid/areca nut-induced pathogenesis. Case-control study further ascertained the candidate genes and its risk genotype in the development of betel-related oral cancer. Moreover, approaches of toxicogenomics (areca nut) and pharmarcogenomics (selective COX-2 inhibitors) on oral cell lines and animal model were utilized to recognize the significance of susceptibility genes, and further to investigate preventive effects of COX-2 inhibitors on the early areca nut-induced oral pathogenesis.
Results: Our findings suggested 12 susceptibility genes related to xenobiotic metabolism (COX-2), DNA repair, inflammatory and stress response (COX-2), and transforming growth factor-beta signaling family. These genes may serve as potential biomarkers for betel quid/areca nut-induced damage in chewers. Further, we also showed that COX-2 promoter -1195G>A genotype has an addictive interaction with betel chewing habit (aOR=79.4) in risk of oral cancer, and the inflammatory response of A/A genotype can be highly induced by areca nut than A/G and G/G genotype. This finding indicates the important role of COX-2 on betel-related oral cancer in Taiwan. Moreover, in chemoprevention studies, two-way cluster analysis from gene expression profiling shows that areca nut-induced damage could be recovered in a suitable dosage of a selective COX-2 inhibitor.
Conclusion: Early detection and chemoprevention are crucial strategies for reducing or blocking carcinogenesis in betel-related oral lesions. Based on our knowledge, the selective COX-2 inhibitor in chemoprevention might be useful for reducing the occurrence of betel-related oral cancer.

SY12-09

New Perspectives in the pathophysiology of Oral Cancer

Li-Min Lin
Kaohsiung Medical University, Kaohsiung, Taiwan

(More detail will be presented during the talk)

Symposium 13- Social Determinants of Health II

SY13-01

Social Gradient of Health in Japan; Why and How Education and Income Matter to Health

Hideki Hashimoto
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Social gradient of health attracts social and political concerns in many countries including Japan. Education and income have long been regarded as major indicators of one's socio-economic positions in the societal hierarchy. Recent research including ours, however, pointed out that simple measurement of socio-economic position through education and/or income lacks theoretical foundation to explain the mechanism of health gradient across social strata. Education may reflect one's skills and knowledge for self-care, while it may be confounded by economic and cultural affluence of one's parents. Income may reflect the degree of access to health-promoting material resources and time, while it may also bring prestige, power, and the degree of social inclusion. Many studies found that income and education distinctively and variously relate to health behaviors, physical and mental health status across genders, age cohorts, and regions, suggesting that the influence of income and education is heterogeneous and unspecified. A recently conducted cross-sectional

survey in Japan found that education and income were associated with current smoking status, but that the association of education was significant only among younger population, while such age dependency was not observed in case of income. Another cross-sectional national survey showed that the association of income with mental health status was different across genders; there was found a strong negative relationship in males, while the reverse was found in case of females. Based on these findings, the presentation will conclude that better specified theoretical models for social gradient of health across educational attainment and income levels should be prepared to reach specific policy implication to achieve the equity in health.

SY13-02

Trends in Social Inequalities in Mortality from Road Traffic Injuries after the Introduction of Helmet Law in Taiwan: A Test of Inverse Equity Hypothesis

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2. Institute of Health Policy and Management, College of Public Health, National Taiwan University, Taipei, Taiwan.

Objective: To examine whether there was an initial increase and then decrease of social inequalities in mortality from road traffic injuries (RTI) after the passage of helmet law in Taiwan as 'inverse equity hypothesis' (IEH) depicts.
Methods: Median household income was used to rank and group 23 cities/counties in Taiwan into four socioeconomic position (SEP) regions. RTI mortality rates differences and ratios between high and low SEP groups and the richest and the poorest regions from 1987 through 2006 were calculated to examine the trends in social inequalities in RTI mortality. Helmet use rates of each city/county from 1996 through 2004 were extracted from traffic accident dataset.
Results: The RTI mortality rate differences between the poorest and the richest regions decreased immediately after the passage of helmet law. However, the RTI mortality rate ratios did not decrease until 2003-04, a four to five years time lag. The ratio was 7.03 in 2001-02 and decreased to 6.18 in 2003-04 and persistently decreased to 5.74 in 2005-06. We found a 3 to 4 years time lag in promotion of helmet use rate between low and high SEP regions.
Conclusion: The social inequalities in RTI mortality increased first and then decreased after the passage of helmet law in Taiwan as IEH depicts. Passage of enforced legislation alone could not reduce the social inequality in health unless an equally rigorous enforcement across SEP regions was assured.

SY13-03

Social Determinants for Healthy Aging: A Compared Study between Urban and Rural Elderly People in Zhejiang Province

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Objective: The aim of this study was to explore the potential social determinants for healthy aging in the rural and urban elderly population of China, and to compare the differences between these two groups.
Methods: A cross-sectional study was conducted from October to December, 2007. Based on community population aged 60 and over, 2441 in rural area and 2554 in urban area were enrolled, respectively. A Chinese version of the 36-item Short Form Health Survey (SF-36) including 8 scales was used to quantify the health related quality of life (HRQoL) reflecting the healthy aging status of participants. The association between potential social determinats and HRQoL was analyzed using a multiple linear regression model.
Results: The scores for SF-36 were significantly lower (p<.001) in the rural elderly comparing to the urban population in dimensions of PF (71.2 ± 25.0 vs 77.7 ± 21.9), RP (48.0 ± 48.0 vs 78.0 ± 39.3), BP (82.1 ± 20.4 vs 89.4 ± 18.8), VT (66.0 ± 15.5 vs 81.1 ± 15.0), SF (78.8 ± 20.7 vs 87.6 ± 19.8), RE (50.7 ± 47.8 vs 84.7 ± 34.0), and MH (67.4 ± 12.7 vs 77.3 ± 12.6) but GH (55.3 ± 20.7 vs 56..4 ± 20.3). In both of rural and urban populations, age was negatively related with PF, RP, VT, and SF scale scores (p<.05). But the correlations were significantly positive, such as between gender (male) and PF, BP; income level and PF, BP, RE; tea consumption and all scales except for RP, BP as well as alcohol consumption and PF, GH, SF scale scores (p<.05). There were existing negative associations between ex-drinking and GH, VT, SF, MH; ex-smoking and PF, GH, VT scale scores (p<.05) in the rural elderly, while living alone and PF, GH, VT, MH scale scores (p<.05) in the urban elderly, respectively. The positive linkages in urban area was also found between current smoking and GH scale score (p<.05), educational level and PF, VT, RE, MH; regular exercise and all scale scores in urban area, respectively (p<.05).
Conclusion: The common social determinants for aging in both of rural and urban elderly populations were age, gender, income level, tea consumption and alcohol consumption and so on. But the fact that some special social determinants, such as smoking, educational level, living arrangement, regular exercise etc., show to be different in urban and rural areas, which can interpret the disparities in health status of rural and urban populations. The official statistics and literatures also confirm that the there is a deep gap of economic and social conditions between the rural and urban area resulting to the health inequalities. In a word, social determinants play important roles in healthy aging.

Symposium 14- Indigenous Health

SY14-01

Health Status and Health Policies for Indigenous People in Taiwan

***Ta-Chuan Sun*[1], *Yu-Chuan Liu*[2]**
1 Minister, Council of Indigenous Peoples, Executive Yuan, Taiwan
2 Executive officer, Department of Health & Social Welfare, Council of Indigenous Peoples, Executive Yuan, Taiwan

Indigenous health has long been a major public health issue. As of 2009, there are a total of 500,000 indigenous people in Taiwan, accounting for 2.1% of the entire population. As the first inhabitants of Taiwan, the social-economic status of indigenous people remains low to date, and their health status is relatively poor. From 1965 to 2007, the life expectancy for indigenous men and women in Taiwan rose from 48.3 years and 52.2 years of age to 64.8 years and 73.7 years of age respectively, increased by 16.5 and 21.5 years of age respectively. Although the ALE for Taiwan's indigenous people had significantly increased, the life expectancy for indigenous men and women remained 10.6 years and 8 years less than men and women in the general population respectively. The mortality rate was particularly severe among indigenous infants, with the rate being 12.5‰ in 2007, more than 2 times the rate of the infants in Taiwan's general population, 6.0‰. As regards the main leading causes of death among indigenous people, the top five causes in order are "malignant neoplasms", "chronic liver diseases and cirrhosis", "accidents and injuries", "cerebrovascular diseases" and "heart diseases". "Chronic liver diseases and cirrhosis" ranks particularly higher as a cause of death among indigenous people compared with the general population, which may be related to high hepatitis morbidity and their drinking habits. Nevertheless, the health of indigenous people and their low socio-economic status are closely related, and many of their causes of death are avoidable. With "chronic liver diseases and cirrhosis" and "accidents and injuries" being excluded, the ALE for indigenous people may increase by 5 years.

Improving the health of Taiwan's indigenous people is a matter of great importance, and depends not only on the establishment of health sectors but also on the promotion of overall national policy through interdisciplinary and multisectoral collaboration. Therefore, the Taiwan government specially established the "Council of Indigenous Peoples, Executive Yuan" in 2000, and set up the Department of Health & Social Welfare to attend to the promotion of disease prevention and health among indigenous people. The current policies being promoted by the Council of Indigenous Peoples include: the alcohol control program, the accident and injury prevention program, the AIDS prevention program, the tuberculosis prevention program and the safe community program. The Department of Health & Social Welfare also attends to the National Health Insurance enrollment and transportation subsidy application for medical visits for indigenous people. In addition, the Council of Indigenous Peoples has published the Annual Statistics Report on Indigenous Demographic and Health Status since 2001 to establish long-term health information regarding indigenous people which helps guide directions for follow-ups and health policies.

SY14-02

Physical Activity and Nutrition in Native Hawaiians

***Jay E. Maddock*[1], *Erin Saito*[2], *and Marjorie Mau*[2]**
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2. Department of Native Hawaiian Health, University of Hawai'i at Mānoa

Introduction: Native Hawaiians are the original inhabitants of the Hawaiian islands. Today, they experience severe health inequities in heart disease, cancer, diabetes, obesity and all-cause mortality. Physical activity and nutrition are closely linked to all of these health outcomes. This study will assess behavioral differences in nutrition intake and physical activity among Native Hawaiians living in Hawai'i. Methods: A random digit dial population based survey of 3,607 adults living in Hawai'i was conducted to assess health behaviors. Results: 17.7% of the sample self identified as Native Hawaiian. The rest of the sample was 38% White, 18% Japanese, 8% Filipino, 4% Chinese, and 14% other. Native Hawaiians were significantly more likely to be obese (37.1%) than all other ethnic groups (15.3%). However, Hawaiians reported more minutes of walking per week than White, Chinese or Japanese respondents. Hawaiians (38.2%) were less likely to eat 5 servings of fruits and vegetables a day compared to Whites (54.7%) and Chinese (48.4%). Hawaiians were more likely to reporting eating a diet high in fat (20.2%) than all other ethnic groups (10.8%). Hawaiians were more likely to report drinking soda (59.6%) than all other ethnic groups (45.6%), less likely to eat breakfast regularly (55.6% vs. 70.3%) and more likely to eat at fast food restaurants and lunch wagons regularly (17.7% vs. 14.3%). Discussion: Native Hawaiians are at a higher risk of obesity than other ethnic groups living in Hawai'i. Results from this study indicate that activity levels in the Hawaiian community are higher than other ethnic groups. However, dietary intake among Hawaiians appears to be poorer than in other ethnic groups. Other studies have shown that communities with high concentrations of Native Hawaiians tend to have food deserts with few grocery stores and high prevalence of fast food outlets. Social-economic, cultural and historical factors also appear to play a role in the health disparities in the Hawaiian community. Community-based participatory programs are becoming more commonplace and made provide promised in addressing some of these disparities.

SY14-03

Globalisation and the Health of Indigenous Peoples

Papaarangi Reid
University of Auckland, New Zealand

There are over 370 million indigenous peoples worldwide residing in 90 countries and living in hugely diverse realities.
We represent nations of various population sizes; as small as a few dozen people through to membership of hundreds of thousands. We are frequently regarded as "ethnic minorities" and have been, and continue to be, subjected to policies and practices of colonisation, marginalisation and subjugation which undermine our health and wellbeing and our engagement with our environment and culture.
We also demonstrate diversity in our engagement with the forces that are loosely called "globalisation". Some indigenous nations own major corporations and participate in the global economy in areas such as fishing, forestry, energy resources, and media. Many other indigenous nations seek similar horizons.
However, very many of us exist at the other extreme of economic engagement. Struggling daily for the basics of life and having a pattern of health that demonstrates that struggle. Even indigenous nations who reside within wealthy countries struggle with equitable access to the determinants of health, to the health care and to quality care leading to inequitable health outcomes.
Despite the engagement, willing or unwitting of indigenous peoples in globalisation, a number of indigenous advocates question whether globalisation holds anything but false promises for us and have labelled globalisation as the new colonisation.
This talk will focus on indigenous critique of globalisation and give examples from indigenous health and wellbeing literature.

SY14-04

Digging Out Indigenous Mental Health: An Exploration of the Role of Cultural Factors in the Mental Health of Indigenous Taiwanese

Taisu Chingyi Kao [1], ***Theodoris Mazarakis*** [2]
Division of Indigenous Health, Dept. of Public Health, Tzu Chi University1
Dept. of Counseling and Clinical Psychology, National Dongwa University2

Indigenous Taiwanese are comprised presently of 14 ethnic groups with a total population of 483,378 (2007), accounting for 2.1% of the general population.
Evidence from studies of physical and sociocultural anthropology indicates that these indigenous populations are descended from Malayo-Polynesian stock and speak languages stemming from the Austronesian linguistic family. These groups can be distinguished from each other not only by geographic distribution, but also by extensive differences in physiognomy, language, and sociocultural institutions.
An early Formosan study provided evidence suggesting that the rate of severe alcoholism, although already higher in indigenous populations compared to the general Taiwan population, was relatively low at the time, while later surveys suggested that lifetime prevalence rates of alcoholism were much higher in all studied indigenous groups than in the Chinese in Taiwan. A recent study shows high rates of alcoholism in two indigenous groups.
The interrelationship between cultural environment and mental health must be held firmly in mind since mental health is enmeshed with economic and political concerns such as poverty, malnutrition, social change, dislocation and acculturation.
A number of investigators have suggested that low degree of acculturation might play an important role in the development and maintenance of alcoholism, while many indigenous Taiwanese believe that the loss of their culture is the primary cause of many of their existing social problems, especially those associated with alcohol while the protective role of cultural factors is yet undetermined. And although it has been proposed that acculturation is associated with mental health, its effect is not consistent cross research. A recent study shows that while higher level of acculturation was related to lower prevalence of alcoholism in one ethnic group, its effect was no longer significant in another group. Still, ethnic identity was significantly associated with alcoholism in these two groups.
On the aftermath of the Morak typhoon, some reports have suggested that indigenous people living in disaster areas did not suffer trauma while others researchers who employed PTSD screening scales to measure the health impact suggested otherwise. This raises a number of questions about the validity of scales used since presently there is no scale taking into account cultural differences and linguistic nuances. Finally it has been observed that in some indigenous communities in disaster areas traditional ceremonies are held in order to comfort residents. The effects of these practices on mental health merit further investigation.

Symposium 15- Primary Healthcare and Public Health

SY15-01

Bridging the Divide: Public Health Challenges in Community Oriented Primary Care

Sian Meryl Griffiths
The Chinese University of Hong Kong

Primary care is recognized as the bedrock of good healthcare systems – but what are the public health contributions and how should we prepare our workforce to contribute to the delivery of good primary health care to our populations?
Definitional issues bedevil the answer to this question. There is general confusion about the differences between primary care and primary healthcare in the literature-with interchangeability of terminology adding to the lack of

clarity. There is further confusion between the delivery of primary care through public health and through primary care services. Van Weel has suggested that *it is time to integrate personal health care and public health, and organise primary care on the principle of care for individuals in the context of an identified population over time* and that *The future of primary care, and health care in general, will depend on how effectively primary practices achieve this community-oriented primary care approach and contribute to equity and social cohesion*.[1]
This presentation will use case studies to explore this challenge from a public health perspective and the implications for future training and practice in public health.
Reference:
1. van Weel C, de Maeseneer J, Roberts R. Integration of personal and community health care. Lancet 2008; Sept 13:372 (9642):871-2.

SY15-02

The Interplay of Public Health and Primary Care at the Local Level: Changhua Experience

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Health care utilization in Taiwan is characterized by the lack of restriction on consumers' seeking behavior. Frequent upgrades in seeking outpatient services result in the deficiency in the clear hierarchy of the medical system. Both the hospitals and the clinics provide the first-line health care for their patients, either by specialists or generalists, the so-called generalist-specialist mixing. During the past two decades, the expansion of the hospitals had put great pressure on primary care and forced the later to change. Bureau of National Health Insurance launched the Family Physician Integrated Care Program (FPICP) in 2003. The novel approach was to organize the community healthcare group as the basic unit for collaboration. However, FPICP revealed its weakness in linking other preventive services or disease management programs.
There were 478 primary care clinics (PCCs) and 27 health centers in Changhua county in 2008. Around 30% of chronic patients and 70% of the other non-chronic were cared in primary care settings. The adoption of disease management programs and preventive services was low in PCCs. The Changhua Regional Integrated Primary Care Program (CRIPCP), sponsored by Department of Health and collaborated with Taiwan Joint Commission on Hospital Accreditation, focused on the integration of related preventive services and disease management programs and also tried to scale up the range of PCCs' participation.
CRIPCP followed the "three phases, six elements" implementation process, including: the infrastructure building phase (from 2004 to 2005), the model learning phase (from 2005 to 2006) and the care integration phase. The six elements were based on Chronic Care Model (Wagner EH., 1996), with the primary health care team (PHCT) as the core of the delivery system design. The focus areas of CRIPCP included major disease management programs (i.e. diabetes, hypertension and chronic kidney disease) and selected preventive services (i.e. adult preventive care, cancer screening and developmental screening for children). RE-AIM model (Gllasgow RE, 1999) was used for program evaluation.
In the early phase, there was a significant two-fold increase of the manpower of certified diabetes educators and a two-fold increase of the ratios of diabetic cases enrolled in disease management from 27% to 53%.
20% of PCCs participated the cancer screening programs.
Two thirds of the primary pediatricians involved the developmental screening program for children and developed an innovation of outreach screening program for preschool children. Totally, 29% of all the PCCs in Changhua were involved in at least one of the above focused primary care programs in 2006. The percentage grew up to 40% in 2009.
From the experience of CRIPCP, we found community and policy support is indispensable for integration. However, to position clearly the physician's role in public health programs is the key for success. The inherent weakness of PCCs made the service provider's change more difficult and physicians' awareness of the need to change is the key. PHCT could support the physician's change. The linkage between the screening programs and disease management programs should be emphasized. The information system should progress from "single-user friendly" to "team-user-friendly".

SY15-03

Arts as Assets for Primary Health Care in Asia

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According to WHO, the ultimate goal of primary health care is better health for all. To achieve this goal, WHO has identified four reforms in 2008 World Health Report: 1) universal coverage reforms; 2) service delivery reforms; 3) public policy reforms; and 4) leadership reforms. In the same report, people centered approach and their participation were also emphasized to carry out these reforms.
For people to become centered and to make active participation, empowerment is crucial. For this, assets-based approach is known to be effective.
High-level medical workers, however, tend to take needs-based approach, by which they identify medical problems of individual and in a community; then, they try to help them to solve the problems. In contrast, assets-based approach seeks the potential of individual and community; then, they are expected to contribute themselves to solve their own problems. In primary health care, we need to strengthen this assets-based

approach and to take a better balance with the existing, powerful needs-based approach.
Arts are one of the assets of individual and community which can be used as a driving force of the assets-based approach. For example, art therapy has been already established in many hospitals and is commonly used there to improve the mental health of patients.
However, the use of arts is less established in primary health care in many parts of the world.
Since the late 1980s, arts have been sporadically used as part of health projects in UK. In *Arts Development in Community Health* published in 2009, Mike White defines 'arts in health' as 'creative activities that aim to improve individual/ community health and healthcare delivery using arts based approaches, and that seek to enhance the healthcare environment through provision of artworks or performances.' The arts-in-health activities were later implemented in Australia and South Africa, too. However, evaluation still remains a challenge.
In Asia, arts have been frequently used in primary health care projects. As part of donor agencies' health development projects in developing countries, arts-in-health approach has been taken, too; for example, street dramas, picture contests, song contests have been used for health promotion activities in schools and communities. However, they tend to be local, sporadic and less sustainable.
Though arts have been taken up frequently to these projects, they are not well perceived as arts-in-health activities. Their performance has not been well evaluated as such, either. This is because the concept of arts-in-health itself is not well known in Asia.
Moreover, we tend to look at only outcome rather than process; to expect only short-term results rather than long-term results; to seek only scientific evidences rather than emotion-provoking success stories and anecdotes.
Now, a balance of focus might be sought so that a pendulum moves more from the former to the latter.
People centered approach and their participation can be highly valued by mobilizing arts as assets and by evaluating process, long-term effects, and success stories and anecdotes.

SY15-04

"Every Family a Family Doctor" Movement in Taiwan

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2. Department of Family Medicine, NTUCM

Objective: Since July 2003, post 921-earthquake and SARS endemic era, National Health Insurance Bureau in Taiwan has been carrying out novel services of「Family Physician Integrated care project」(FPICP) to highlight community medical group-based practice in primary care sector. Evidence-based progress of this primary care project in community health was investigated.
Methods: Regarding the update quantity and quality of "every family a family doctor" movement, we used systematic literature review and statistical reports to evaluate the current situation of FPICP.
Results: Until Dec 2008, the FPICP has only covered 6.6% of Taiwan population, 17.8% of primary care physicians and 20.0% of community hospitals and clinics joined to form 324 community medical groups in six national health insurance regions. Total 29 papers selected from 81 papers reviewed in literature during 2004-2008 to analyze service of quality versus five FPICP components. Most of papers belonged to cross-section studies. The satisfaction rate of family members was 71.1% and 76.3% of primary physicians. Continuity of care and preventive services was better in FPICP patients. There were lacks of preventive service outcome studies.
Conclusion: Further development is not only the increasing number of new founded medical groups but also more new allied health professionals participated; meanwhile, each individual community medical group could promote its successful experience as a role model for more primary physicians to learn. More participants will minimize the inequality and improve primary care quality in different NHI regions. Facing rapid increasing elder population and aging society in Taiwan, long term care insurance is proposed for legalization by government at this moment. It is urgent to assure well functioning shared care services and promote propaganda to attract more people to register in FRICP especially older adults.

Symposium 16- Mental Health and Public Health

SY16-01

Leadership for Mental Health System Development

Harry Minas
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Objective: Mental disorders are a major component of the non-communicable disease burden in all countries, including low- and middle-income countries. Despite this fact mental disorders are relatively neglected by governments and public health systems, and most people with mental disorders receive no treatment or care.
This paper will describe some recent initiatives that aim to improve population mental health by strengthening capacity of mental health systems.
Methods: An outline will be given of several international initiatives that aim to strengthen capacity of mental health systems in low- and middle-income countries.
Results: Preliminary information suggests that a number of mental health system capacity-building initiatives in low- and middle-income countries, particularly in Asia, are having a positive impact and that scaling up of

mental health services will be possible despite substantial under-investment in such services by governments. Conclusion: Mental health system development efforts need to be substantially increased if improved population mental health is to be achieved in low- and middle-income countries.

SY16-02

Mental Health and Suicide after Natural Disaster

Chiao-Chicy Chen
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Objective: The purpose of this study is to clarify the issue concerning mental health and suicide after natural disaster. Earthquakes, floods, tsunamis cause deaths and injuries of many people around the world every year, which subsequently result in mental health problems, such as depression, post-traumatic stress disorder. However, whether or not mental health problems would exaggerate suicide remained uncertain. Using earthquakes as the example, we address the question: do suicide rates increase after natural disaster?
Methods: Using earthquake and suicide as the keywords, we searched Medline from 1980 to 2008 to identify relevant articles. Only those studies which were dealing with suicide mortality rate were included in our analysis.
Results: Seven papers were included in this analysis, namely, 4 papers related to 1999 Nan-tou earthquake in Taiwan and 2 papers were regarded to 1995 Kobe earthquake in Japan. One paper reported by US CDC. Most of Taiwanese studies reported increased suicide rate after Nantou earthquake, except study by Lu, who found no association between the degree of damage and the increase in suicide rate. Otherwise, Chou et al found that victims were 1.46 times more likely than non-victims to commit suicide following earthquake. Yang reported higher suicide rates were observed over a 10-month period following disaster. Liaw reported that suicide rate for all age groups all increased, but only group of age 45-64 reached statistically significant. The studies from Japan and US did not support that suicide rates increase after earthquake.
Conclusions: In Taiwan, the suicide rate increased since 1994, and further became one of the leading causes of mortality in 1997 that was reported by Department of Health, Executive Yuan (the Cabinet). The suicide rate escalated persistently and reached the peak in 2006 by 19.3 per 100 thousands people. Not only earthquake in Nantou in 1999, but also tremendous impact of socioeconomic and political events, precipitated suicide rate increased during this period. For example, migration-out of traditional industries to foreign countries since early 1990, and amendment of the Labor Standards Act in 1996 and 1998, which causes drastically increased unemployment of many working labors. It is already known that the unemployment rate is closely related to suicide rate. We concluded that natural disaster may raise mental health problems among the affected people, but may not directly cause increased suicide rate. We highly agree that diverse contextual effects should be taken into consideration when issue of suicide rate after natural disaster is dealt with.

SY16-03

Prevalence of Mental Disorders in the General Population: Is there A Gender Difference?

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2. Penang College of Medicine, Malaysia

Objective: This paper examined the gender differences in common mental disorders in the general population in Malaysia.
Methods: This population–based household study utilized a multistage cluster sampling based on ethnicity and geographical location in Malaysia, covering 5 states. A male and a female, were chosen in each household with the aid of random selection tables. A one-to-one structured interview was carried out in homes using the iPAQ or pocket computers. Diagnoses of common mental disorders were made based on the Clinical Interview Schedule-Revised (CIS-R). A cut-off score of 12 indicates the presence of a mental disorder. A score of 2 or more for each of the CIS-R 14 symptoms indicate the presence of prominent symptoms.
Results: 3666 respondents (89% response rate), consisting of 61% females and 39% males, above 16 years old participated. There was a significant difference in gender in the prevalence of common mental disorders ($p<0.001$). 208 (6%) met the criteria for ICD-10 diagnosis of mental disorders with the CIS-R. The primary CIS-R diagnoses were: mixed anxiety and depressive disorder-mild (54.3%, n=113); mixed depressive episode (8.2%, n=17); generalized anxiety disorder (8.6%, n=18); mixed anxiety and depressive disorder (19.7%, n=41); social phobia (7.7%, n=16); social (isolated) phobia (1%, n=2); agoraphobia (0.5%, n=1). Females were 1.8 times more likely to have common mental disorders than males.
Conclusion: Knowledge on the prevalence of mental disorders and the gender group, who are at risk, would be essential for clinical management, policy decisions and mental healthcare utilization.

Lunch Symposium

***JECM* and 21st Century Medicine**

Edwin L. Cooper
Ph.D., Sc.D. Editor-in-Chief, Journal of Experimental and Clinical Medicine Distinguished Professor, Laboratory of Comparative Neuroimmunology Department of Neurobiology, David Geffen School of Medicine at UCLA, University of California, Los Angeles, 90095-1763, U.S.A.

I accepted the challenge of the *Journal of Experimental and Clinical Medicine* (*JECM*) as one appropriate for another phase of my career—different from the first. Concerned about the fairness and broad sweep of immunology in the late 1960s, I was convinced of the utility and intellectual worthiness of exploring the immune systems of primitive species. In other words, I the biologist/zoologist chose to create an amalgam of the nascent immunology of the early 1960s with ancient zoology (since Aristotle) to derive comparative immunology.

Now where does *JECM* fit into this scheme? Clearly, *JECM* is our attempt to contribute in a noble way to ameliorating the cause of human pain and suffering through the enlightening approach of information: publication which if done properly and with the highest standards of peer review will serve to influence later works and in so doing exert an "infectious" intellectual, spreading effect. Like medicine, the face of publishing has changed enormously, perhaps more than certain approaches to medicine itself. Nevertheless, there is a vision to medicine in the 21st century that includes, according to Scientific American 2006, hope for a short list of diseases, by no means exhaustive, such as: malaria, virtual reality therapy, heart surgery, pain control, stem cells, universal genomes, suspended animation.

And this should extend from those borders to a universal influence. Clearly, there is an illustrious period behind us that surely carried over into the current period of phenomenal growth and influence. It is rather common knowledge that the 18th century produced vaccine against smallpox which, by analogy, was a fertilized egg that hatched the rewards of 20th century immunology and its dissection into far more than was anticipated: phagocytosis in an invertebrate animal by the sea, Metchnikoff split the monolithic 19th century immunology into cellular and humoral; then came another schism, into innate and adaptive. Now there is the recognition that adaptive immunity as purely an attribute of vertebrate animals including humans is dependent on the ancient innate arm of the immune system. Now the three essential characters especially for human immunity include, in the broadest terms, the ever-present phagocyte in all its guises (our ancient ancestor), and the T cells and B cells, newcomers in the evolutionary sense. Human bone marrow, nearer to the frogs' than most fish, is an incubator of the source of cell machinery, the millions of drivers of our existence.

What will JECM capture as it contributes to the seeming onslaught of biomedical journals? Founding Editor, President Wen-Ta Chiu, aims to exert a most positive influence. He is the President of the Asia-Pacific Academic Consortium for Public Health (APACPH) and other societies (Academy for Multidisciplinary Neurotraumatology, etc.). The APACPH consists of 64 universities from 21 countries. In 2009, the APACPH Annual Conference will be held in Taipei, in December 3–6. There will be five workshops within a 3-day program; there are most likely about 700 abstracts (not including invited speakers and workshops). This should provide a most convenient and inspiring venue in which to unveil JECM with every hope that it will inspire the submission of high-quality full original papers (reviews, commentaries, experimental and clinical papers) to JECM. Almost simultaneously, we hope that JECM will assume the position of best journal in the Asia-Pacific region.

The Asia-Pacific Journal of Public Health is Moving on…

Wah Yun Low
Editor-in-Chief, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

The Asia-Pacific Journal of Public Health (APJPH) is owned by the Asia Pacific Academic Consortium for Public Health (APACPH) with membership of 69 Schools of Public Health from about 20 countries in the Asia Pacific region. The Journal is a monumental flagship of APACPH and has completed 22 years of publication since its inaugural issue in 1987. This peer-reviewed Journal is dedicated to supporting the mission of APACPH which is to enhance the quality of professional education for public health and primary health care of its member institutions. Throughout these years, the Journal has transformed and grown into a respectable and accessible journal in the region.

The journal is a channel of documenting and communicating evidence based research findings, public health programs and strategies, and lessons learnt, and we intend to make this Journal a cutting-edge journal for public health issues in the region. It serves as a catalyst, stimulate discussion and action and help us meet the global challenges we are facing. The popularity and the visibility of the Journal have increased tremendously when the Journal joined forces with Sage Publications in 2008. Together with my editorial team, we hope to bring the Journal to a higher level and become an international journal of high quality publications. The APJPH is rapidly moving on.

Oral Track 1- Injury Prevention

OT1-01

Bicycle Injury among Left-Behind Children in the Southern Rural Areas of China

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2. The Chinese University of Hong Kong, Hong Kong

Objectives: To investigate the bicycle injury of children living in the Southern rural areas who were left-behind (Left-behind Children, LBC) since their parents are seeking for jobs in the urban areas.
Method: This study of rural Chinese middle school students was undertaken as part of a larger study in Chaoshan region, Guangdong, China. A comprehensive survey conducted in students of 6 middle schools in 1 township in Chaoshan region. Information was collected by a self-administrated questionnaire on bicycle injuries happened on the students and health related behaviors and completed with written informed consent.
Results: Of the 2957 students in our study, 590 (20.0%) were left-behind children. Ages ranged from 10 to 18 years (mean age: 13.74 years). 49.7% of the left-behind children did not live with their both parents. A significant difference of possibilities of bicycle injury ($X2=20.572$, $p<0.01$) was detected between LBC and non-LBC with the injury rates of 18.3% and 10.7% respectively. LBC increased the odds of bicycle injury (OR: 1.68, 95%CI: 1.25-2.26) compared with non-LBC. In addition, female, higher home income and higher grade were also recognized as protective factors in children bicycle injuries while education degree and job types of parents did not show relationship to children's bicycle injury.
Conclusion: Children under 'left-behind' situation were in poor parental protection. Recognition of this situation by the communities, parents and policy makers would facilitate more attention and effective intervention programs to improve the situation.

OT1-02

Epidemiology of Animal Bites in Children in Srilanka

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2. University of Colombo, Sri Lanka
3. Disaster Preparedness and response unit, Ministry of Health, Sri Lanka

Animal bites are a major public health problem among children. A retrospective study was carried out in Teaching hospital Anuradhapura Sri Lanka to determine the types and the pattern of animal bites admitted to pediatric trauma Unit over a period of three months starting from January 2008. Parents of 100 consecutive children admitted with animal bites were interviewed to find out epidemiological data in detail in January 2009. Animal bites accounts for 49.2% of total admissions (565) to pediatric trauma unit. Majority was dog bite 74.37%, followed by cats bite 20.21% and Monkey bites 2.5%. Rat, Rabbit and Squirrel bites accounts for the rest. Boys and girls were equally affected. Considering the cat bites 2 peaks were identified according to the age of the victim. First peek during the 3rd and 4th years and second during 10th and 11th. Less marked peeks were seen among dog bite victims, where 1st peek extend from 3rd to 6th and the second during 10th -12th years. Majority of the dog bites (92%) has occurred either at home or the neighbor's house. Stray dog bites were seen only in 3% of the sample. Provoking the animal, having the meals in the vicinity of the animal were the commonest pre disposing factors. None of the domestic dogs were properly vaccinated and all the victims were given anti rabies prophylaxis. Wounds had been washed with soap and water in every affected chi

OT1-03

Evaluation of the National Policy' Implementation on Child Injury Prevention and Control in Several Provinces, 2008

Quyen T Bui, Linh Le, Cuong Pham

Hanoi School of Public Health, Vietnam

Objective: 1. To describe the situation of child injury. 2.To describe child injury prevention activities and 3. To evaluate people's knowledge and practice in child injury prevention.
Method: A survey was conducted in 2008 using both quantitative and qualitative methods. Survey sites were three provinces, where child injury prevention activities were implemented. Quantitative data were collected through reports on child injury at levels from commune to province. Qualitative data were collected through in-depth-interviews and focus-group-discussions. Altogether, 60 in-depth-interviews (with 60 staffs working in Health facilities, Red Cross) and 6 focus-group-discussions (with 75 child-caregivers) were carried out.
Results: Child injury rate was high (about 2,700/100,000) with rate in males higher than females. Injury death rate was high (55% of injured). The leading cause of death was fall in Hanoi, traffic accident in Binhphuoc and drowning in Namdinh. Awareness of people were low in terms of injury risks as well as how to prevent injury and provide first aid to injury victims. Surveillance data on child injury were not well updated and difficult to access. There was no good collaboration and coordination among sectors. Implementation of the safe community model targeting at child injury prevention was greatly challenged by local limited resources.
Conclusions: Child injury rates in the provinces were high. The localities need to be more active in making plans for child injury prevention activities and implement concrete activities to improve the program effectiveness. There should be a consistent report form in different localities.

OT1-04

Help Seeking Behavior and Implication on Health Service Provision of Post Nonfatal Unintentional Household Injury Patterns in Hong Kong

Emily YY Chan, Jean Kim, Joyce Leung, Sian Griffiths, Carol Suen
The Chinese University of Hong Kong, Hong Kong

Introduction: Health seeking behaviors and preferences for health care location after nonfatal unintentional household injury have not been examined in urban settings. This study explores help seeking behavior of people who have incurred non-fatal household injuries in Hong Kong. We examine individual choice and preference for medical care service provision after home based injury. Predictors and implications of injury prevention and health service delivery are discussed. Methods: An anonymous, population-based, cross-sectional telephone survey study was conducted in March-May 2009(n=6500). A modified, Chinese questionnaire based on WHO Guidelines for Conducting Community Surveys on Injuries and Violence was used for data collection. Descriptive and multivariate analysis was conducted to identify predictors of health service utilization and to examine help-seeking behavior post-non-fatal unintentional household injury in general population. Results: Results indicated 43% of population with injury received no help, 43% relied on self-care as first aid, and bone setters (36%)/traditional herbalists (28%) are more common than the Western medical practitioners (private general practitioners 12%, A&E 12%) as the help obtained after household injuries. Proximity (46.4%) and trust (17.9%) were cited as the main factors in the choice of care; 77% of population required 2nd treatment post injury. Predictors for health service location were examined and discussed. Conclusion: Predictors for health service utilization, mode and location of health services providers were identified. Injury prevention program and service providers should target on specific injury as well as the socio-demographic subgroups.

OT1-05

Trend and Implication of Helmet Use Six and Twelve Months after Helmet Regulation in Central Vietnam

Nguyen Mai Huong, Cuong Pham Viet, Ha Nguyen Trong
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In Vietnam, Road Traffic Accidents (RTA) is being serious problem. In order to decrease RTA cases, helmet-wearing was made compulsory for riders and passengers driving on all roads from December 2007. Objectives: Assess helmet-wearing six and twelve months after the regulation in three central provinces of Vietnam (BinhDuong, YenBai, DaNang). Method: Road side observations were made on classes of road using 5 sites in each province. Two researchers observed wearing-helmet, one observing riders, the other passengers. Observations were made on one weekday and one weekend (non consecutive), 4 times per day: 7:00-9:00, 10:00-12:00, 16:00-18:00 and 19:00-21:00. Helmet-wearing and incorrect use (helmet strap not fastened) were recorded for riders and passengers. Results: Helmet-wearing was higher after enforcing the regulation. However, comparing the 6 and 12 month observations helmet-wearing among riders decreased from 93.9% (June) to 88.1% (December) in YenBai; increased from 94.6% to 96.9% in BinhDuong and leveled off 99.7% in DaNang. Helmet-wearing among passengers fell from 90.5% to 78.5% in YenBai; from 98.8% to 90.2% in DaNang and rose from 88.7% to 94.6% in BinhDuong. In YenBai and DaNang, helmet-wearing among riders and passengers fell at 4 observation times. Incorrect wearing among riders and passengers increased in 3 provinces. Conclusion: The regulation had a positive impact on helmet-wearing in three provinces. However, incorrect use is rising in riders and passengers. This trend and the reasons behind are likely significant for Vietnam and other countries introducing regulation. Possible causes and policy implications of this trend will be explored as likely remedies.

OT1-06

Risk Factors for Hip Fractures in Elderly People in Taiwan

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2. Taipei Medical University, Taiwan

Hip fractures are the most serious consequence in elderly fallers, and more than 90% of them result from falls. It is necessary to identify risk factors for hip fractures in the elderly before any effective intervention can be undretaken; however, these factors have not been determined in Taiwan. A case-control study was conducted to determine risk factors for hip fractures in elderly people. As recruited from the emergency rooms of three hospitals in Taichung area, persons aged 65 or older who fell and sustained a hip fracture were selected as cases and those who fell and had an injury other than hip fractures as controls. In the study, there were 336 cases and 479 controls. The result of the logistic regression model analysis shows that the risk of occurring a hip fracture during a falling event was significantly associated with older ages, poorer vision, osteoporosis, use of medication of lowering blood sugar levels, type of falls, falling direction (the side and backwards), and long lie after a fall. Most of risk factors identified in the study are consistent to those reported in previous studies; however, some are in conflict possibly due to environmental or racial differences. Factors such as poorer vision, use of medication, and fall direction can be modified or trained in order for reducing the occurrence of hip fractures during a fall in the elderly.

OT1-07

Demonstrating A Survival Swimming Program in Natural Water Bodies to Prevent Drowning

***Orapin Laosee*, Sunitra Pakinsee, Ratana Somrongthong, Natawan Deelertyonyong, Sukarin Wimuktayon**

Chulalongkorn University, Thailand

Child drowning in Thailand is a leading cause of mortality and is now a major public health priority. Providing children with survival swimming lessons is an effective way of decreasing the risk of drowning. However, conventional swimming lessons have been limited to standard swimming pools which are a limited resource in developing countries like Thailand. Operational research was conducted in the Chaing Rai Province during 2008 which aimed to develop a feasible survival swimming program to be effective in natural bodies of water and increase the survival swimming ability of 60 primary school children (aged 6-12).
A cooperative of people from the local administration, health center staff, parents, school teachers, and the research team was formed and initiated the survival swimming program as a community effort.
A clean natural water body in the community was chosen as a safe area to swim. Local materials such as bamboo, empty gallon plastic bottles and dry coconuts were utilized during program. The swimming lessons were provided by a trained survival swimming instructor and 60 children from the local school were enrolled and divided into five groups of 12. At the conclusion of 20 swimming lessons, over 80% (83.3%) of the children gained a level of swimming ability which required the physical skills necessary to enter and across at least 20 meters of open water without assistance and floated for 90 seconds.
This research demonstrated that with limited resources a survival swimming program in a natural water body is an effective and feasible way to increase swimming abilities of primary school aged children.

OT1-08

Accident Emergency Response of Public Buses at the Daya Automobile Terminal in Makassar- Indonesia

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Bus accidents frequently occurred with fatal injuries and high number of victim. Indonesian government has regulated the accident emergency response that is attitude and action which should be implemented quickly in holding an accident event of motor vehicle. The regulation arranges the safety minimum standard which can give maximum safety protection to bus passengers and crews. This is intended in order the bus crews and passengers can get maximum protection by confirming that the buses have minimum safety requirement which is always in good working condition and the crews of buses know to operate them. Bus is one of land transportation which is often to get an accident. The most important factor which may minimize the number and fatality of accident are the driver behaviors and emergency response facilities of buses. This study is aimed to identify the accident emergency response of buses in the Daya Regional Terminal, Makassar city, Indonesia. Total 147 of 478 buses and their drivers involved in this study selected by using an accidental sampling method. Results of the study indicated that 42 buses (28.6%) have fully facilited with emergency tools. Total 129 drivers (87,8%) having high knowledge score, 108 drivers (73,5%) having good attitude score, 15 (10.2 %) drivers having good proactive action score and 6 drivers with good reactive action score. The study suggests to educate the bus company managers and drivers on bus safety regulation followed law enforcement in order they complete and maintain their buses in good and full safety facility.

Oral Track 2- Clinical Research & Public Health

OT2-01

Gender Differences in the Relationship between Depression and Cardiac Autonomic Function among Community Elderly

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Objective: The mechanism underlying the differential effect of depression on morbidity and mortality in men and women remains unknown. This survey was designed to examine gender effects on the relationship between depressive symptoms and cardiac autonomic function among community dwelling elderly.
Methods: Six hundred and six randomly selected community-dwelling elderly men and women ≥65 years of age were enrolled. Depressive symptoms were assessed with the Hospital Anxiety and Depression Scale. Cardiac autonomic function was evaluated by measuring heart rate variability parameters. Frequency-domain indices of heart rate variability were obtained.
Results: Among the subjects, 58.4% were male with a mean age of 77.9 years. Stratified analyses by gender revealed a dose-response association between depressive symptoms and lower cardiac vagal control among elderly males (p=0.003). Male subjects with mild depressive symptoms (depression scores: 5-6) showed prominent cardiac sympathetic predominance compared with the reference group (depression scores: <5) (p=0.005). In contrast, these findings did not exist among elderly females.
Conclusions: The association of depressive symptoms with poor cardiac vagal control and sympathetic predominance was more robust among elderly males than females. This finding may help explain gender differences in the association of depression with morbidity and mortality.

OT2-02

Influence of Physician's Specialty on the Risk of Diabetic Ketoacidosis Admission in Diabetes

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Background: Diabetic ketoacidosis (DKA) is a life-threatening complication of diabetes mellitus, and the risk of DKA can be reduced by providing adequate and good-quality care. The aim of this study was to assess the risk of DKA admission in relation to physician's specialty.
Methods: In this retrospective cohort study, we used the 1997 National Health Insurance (NHI) ambulatory care datasets to identify 500,867 diabetes patients. Based on the ambulatory care visits of 1997, all study subjects were categorized into four groups, i.e., those routinely cared by endocrinologists, by endocrinologists or internal medicine physicians, by endocrinologists/ internal medicine physicians and other specialties, and by non-endocrinologists/ internal medicine physicians. The study cohort was then linked to the 1997-2006 inpatient claim data for possible hospitalizations due to DKA (ICD-9-CM: 250.1). We employed logistic regression models to estimate the adjusted odds ratio (AOR) of DKA admission episode and frequency in relation to physician's specialty after controlling for characteristics of diabetic patients and medical institutions.
Results: Compared to patients routinely cared by endocrinologists, those not regularly cared by endocrinologists were all associated with a significantly increased AOR (1.51 to 2.12) of DKA admission episode. The AORs of higher frequency DKA admission (>=0133 times/person-years) among the patients not regularly cared by endocrinologists were also significantly elevated in a range of 4.45 to 6.93.
Conclusions：Physician's specialty may pose significant influences on the risk of DKA admission in the diabetes population of Taiwan. Promoting the quality of diabetes care delivered by non-endocrinologists should be seriously considered.

OT2-03

Cigarette Smoke Affected the Association between Type 2 Diabetes Mellitus and the Risk of Dementia

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Background: The interaction between type 2 diabetes mellitus (DM) and smoking on the risk of dementia has not been reported previously.
Methods: A total of 169 Alzheimer's disease (AD) patients, 97 vascular disease (VaD) patients and 215 controls were recruited from Departments of Neurology and Health Checkup service at National Taiwan University Hospital and Cardinal Tien's Hospital from 2007 to 2009. DM and smoking status were collected from questionnaires and medical records.
Results: Cigarette smoke was significantly associated with an increased risk of AD [adjusted odds ratio (AOR)=3.56, 95% confidence interval (CI)=1.65-7.68] and VaD (AOR=2.60, 95% CI=1.11 to 6.11) after adjusting for age, sex, BMI, and religion. Type 2 DM was associated with an increased risk of VaD (AOR = 4.56, 95% CI=2.28 to 9.14), but the result was not significant for AD. A significant interaction was observed between cigarette smoke and type 2 DM on the risk of AD (p for interaction=0.006) but not for VaD (p for interaction=0.69). Smokers (current and former) without type 2 DM showed a significant increased risk of AD (AOR= 5.21, 95% CI= 2.30 to 11.79) as compared with non-smokers without type 2 DM. Smokers and non-smokers with type 2 DM showed a 9.96- and 3.95-fold risk of VaD (95% CI=2.37-41.85 and 1.80-8.67, respectively).
Conclusion: A significant interaction was observed between cigarette smoke and type 2 DM on the risk of AD but not VaD.

OT2-04

Tobacco Smoking and Serum Bilirubin Subtypes in Healthy Korean Men

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Objective: Serum bilirubin is a potent antioxidant and has been found to be inversely related to cardiovascular diseases. Smoking is a modifiable risk factor for cardiovascular diseases. However, there are only a few studies on tobacco smoking in relation to serum bilirubin. In addition, most of these studies were limited to total bilirubin. Therefore, we explored the association between bilirubin subtypes and tobacco smoking among healthy Korean men.
Methods: This study included 48,040 men aged 30-87 years who visited the Korea Medical Institute (KMI) for routine health evaluation from January, 2007 to December, 2007. The associations of smoking status with serum direct, indirect and total bilirubin were assessed by logistic regression analyses taking consideration differences in subjects with different smoking characteristics.
Results: Current smokers had lower serum bilirubin concentrations than nonsmokers and ex-smokers. Smoking amount, smoking duration and pack-years were inversely and significantly related to direct, indirect and total bilirubin. In a multivariable adjusted model, odds ratios (95% confidence interval) to belong the lowest bilirubin quartile in the highest smoking duration group compared with nonsmokers were 1.9 (1.8-2.0) for total bilirubin, 1.8 (1.7-1.9) for direct bilirubin and 1.8 (1.7-2.0) for indirect bilirubin, respectively. These

relationships between total bilirubin and smoking amount were similar independent of different groups of age, body mass index, hypertension, diabetes, serum lipid and alcohol intake.
Conclusion: These results support that all three subtypes of serum bilirubin were inversely related with smoking amount and duration in Korean men. Further studies are needed to confirm the association of bilirubin with smoking.

OT2-05

Effectiveness and Safety of High Power Photoselective Vaporization for Benign Prostatic Hyperplasia

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Background. Photoselective vaporization of the prostate (PVP) has been evolved as an alternative treatment for benign prostatic hyperplasia. Our objectives are to evaluate the effectiveness and safety of the new high power PVP procedure. Methods and Findings. one hundred and fifteen men with symptomatic benign prostatic hyperplasia were retrospectively follow up. The basic demographic parameters including height, weight, education level and annual income were significantly different between the 2 groups. Compared to TURP, the PVP group had better outcomes in IPSS improvements(13.6 versus 11.7, P=0.046), quality of life score change (2.91 versus 2.5, P=0.034). After averaged 11 months of follow up duration, the TURP group showed higher urethral stricture rates (3.3% versus 14.5%, P=0.033). In multivariate analysis results, after adjust age, body mass index, prostatic specific antigen density, education level, annual income and preoperative value of IPSS, the procedure difference was a prediction factor for IPSS improvements (estimate coefficient=2.70, 95 confidence interval=0.71 – 4.69). The subgroup analysis showed younger patients had better improvement in IPSS after PVP. Conclusions. This study indicates that PVP offers effectiveness for BPH and advantageous over TURP with regard to operative safety. The long term follow up is needed to evaluate the durability and possible morbidity.

OT2-06

Association of Serum Urate with Risk Factors of Metabolic Syndrome

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Metabolic syndrome has been found to increase substantially with increasing levels of serum urate. Prevalence of metabolic syndrome was more than two-fold greater in patients with gout than in individuals without gout. The objective of our study was to establish the association of serum urate with risk factors of metabolic syndrome. There were 1272 respondents in our study with 78.5% Malays, 46.5% males and the mean age was 48.18 + 5.19 years. The overall prevalence of hyperuricemia was 16.8%, with higher prevalence in males compared to females (22% vs. 12.2%). For men and women, serum urate was statistically correlated ($p < 0.05$) with increasing waist circumference(r=0.134 and r=0.278), systolic (r=0.176 and r=207) and diastolic blood pressure (r=0.146 and r=0.205) as well as triglyceride(r=0.183 and r=0.208); and negatively correlated with high density lipoprotein cholesterol (r= - 0.100 and r= - 0.182). Serum urate level gradually increased with increasing number of metabolic risk factors. The odds ratios for metabolic syndrome in the presence of hyperuricemia in men were 1.66 (95% C.I.:1.12-2.45) and 2.46 (95%C.I.: 1.54-3.93) in women. In the multivariate logistic regression model, among men: those with hypertension (OR: 1.95; 1.24-3.05) and hypertriglyceridemia (OR: 1.91; 1.24-2.93) had higher odds of getting hyperuricemia. Among women: those with hypertension (OR: 2.04;1.24-3.34) and central obesity (OR: 1.81 ;1.00-3.28) were more likely to have hyperurecemia. This study demonstrated a linear relationship between serum urate level and increasing number of metabolic risk factors and established a positive relationship between hyperuricemia and hypertension (male and female), hypertriglyceridemia (male) and central obesity (female); after adjusting for confounding factors.

OT2-07

Algorithm of Malaria Diagnosis as A Result of Comparison between Clinical Symptom and Microscopic Test at the Mepane Public Health Center in Poso Regency, Indonesia

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Up to now malaria is a health problem for the people in Indonesia in which malaria is endemic in almost every region. Malaria can cause illness and death and has socioeconomic impact on poor people in the endemic area. The aim of the study was to make algorithm of malaria diagnosis as a result of the comparison between clinical symptom and microscopic test. The study was a cross sectional design. The study was conducted from July to November 2007. Subjects in the study (n= 136) were examined clinically and microscopically for malaria. The data was analyzed by using chi square. The results of the study indicated that there was a correlation between clinical symptom of malaria and microscopic test. The symptoms related to microscopic test were fever (p = 0.00), shiver (p= 0.00), headache (p= 0.00) and painful joint (p= 0.00). A multivariate analysis using logistic regression indicated that headache, shiver, fever, and painful joint are algorithms of malaria with sensitivity (91.0%) and specificity (83.3%). We conclude

that algorithm of malaria could be used as an alternative way in early diagnosis for malaria in endemic area with limited facilities of microscopic laboratory examination.

OT2-08

Metabolic Syndrome Progression in Young Japanese Workers in A Selected Company

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Risk factors for metabolic syndrome are a common finding in routine health checkup in Japanese workplace. This study assesses relationship between risk factors and the progression of the metabolic syndrome in young and young adult Japanese workers.
A number of 5,640 Japanese workers of age 25, 30, and 35 years old were longitudinally studied for 5 years in one company. The metabolic syndrome parameters are as follows: Obesity: BMI>25; Hypertension: systolic Bp 130mmHg or diastolic Bp 85; Dyslipidemia: Cholesterol 220mg/dl or HDL-cholesterol<40 or Triglyceride 150; Hyperglycemia: Fasting blood sugar 100mg/dl. A subject was considered to have liver dysfunction if AST 31 or ALT 31 GTP 51. Alcohol intake history was taken to see possible association. Chi-square (2), Poisson and logistics regression were applied for statistical decision.
Over 5 years, 6.3% new workers significantly developed metabolic syndrome risk with male preponderance. Relative risk is significant for all factors. Subjects with liver dysfunction at baseline exhibited metabolic syndrome components more than those without at baseline over 5 years. In 25-year group, subjects without any metabolic syndrome component at baseline developed more obesity and hypertension after 5 years. The 30- and 35-year group developed dyslipidemia in similar course of time. Logistic regression explored BMI and liver dysfunction to be independent for metabolic syndrome in 5 years, irrespective of age or alcohol intake.
Liver dysfunction and BMI are independently associated with metabolic syndrome in Japanese young workers.

Oral Track 3- Clinical Research & Public Health

OT3-01

A Public Opinion Survey of Attitudes toward Genetic Epidemiology and the Taiwan Biobank

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Just as nations around the world have one by one been establishing depositories of genetic materials, with groups of population as the foundation for research, the incipient plan for the Taiwan Biobank has been assailed by challenges and suspicions from human rights organizations. The crucial controversy lies in whether the public can comprehend the content of this significant national science plan, and whether or not the public supports the establishment of the Taiwan Biobank. The investigation reported here utilized telephone interviewing in the period November 22 through 29, 2007, and completed interviews with 2,499 persons; this achieves representation of the population with a level of confidence level of 95%, with a sampling error of no more than ±1.96%. This research discovered that 82.2% of respondents agreed with the view that "a person's health is related to genetic heritage." 82.8% of respondents agreed with the "need to research the influence of life environment and a person's genetics on health." 76.6% of respondents agreed with the need for "long-term collection of material on public health, life, and genetics, in order to understand the causes of disease." 78.2% of respondents agreed with the need for a "Taiwan biological materials repository for long-term collection of material on public health, life, and genetics, in order to improve national health"; and only 9.9% felt this is unnecessary. The research team believes that the opposition of 10% of the public cannot be allowed to block the support of 80% of the public for establishment of the Taiwan Biobank. What is important is to find a way to carry out this policy in a way that can be accepted by the public, and that is the imperative that should be the responsibility of the government.

OT3-02

Prostate Specific Antigen as A Prognostic Factor for Biochemical Progression of Advanced Prostate Cancer Patients Receiving Hormone Treatment

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Background: The aim of this study is to identify prognostic factors affecting biochemical progression (BCP) of advanced prostate cancer patients receiving androgen deprivation therapy in Taiwan.
Methods and Findings: A cohort of men diagnosed with prostate adenocarcinoma ever receiving leuprorelin acetate between November 1995 and April 2008 was collected from the computerized registry systems in two medical centers. A total of 107 eligible patients with newly diagnosed advanced (cT3 above) prostate cancer were assessed for the development of BCP and overall survival. All men had initial serum prostate specific antigen (PSA) measurements. Cox regression model and Kaplan-Meier analysis was used to evaluate the relationship between the clinical parameters and the BCP. A total of 54 patients (50.5%) had BCP during a median 46.1 months' follow-up. In a multivariate analysis, initial serum PSA greater than 105 ng/mL (relative risk [RR], 3.23; 95% confidence interval [CI], 1.66-6.29),

pathological bone fracture (RR, 2.73; 95% CI, 1.37-5.44), and hemoglobin 12.7 g/dL or less (RR, 2.05; 95% CI, 1.10-3.81) were prognostic factors of BCP. As compared with those in the lowest tertile, participants in the highest tertile of initial PSA had nearly 3 times the age and body mass index (BMI)-adjusted risk of BCP (RR, 3.16; p for trend <0.009). Further adjustment for hemoglobin and the clinical diseases, the relative risk remained significant; the multivariate RR was 3.68 (p for trend <0.022).
Conclusions: Our data demonstrate that initial serum PSA is a significant risk factor for BCP for Taiwanese advanced prostate cancer patients.

OT3-03

Uric Acid Independently Associated with Atherosclerosis in Subjects without Metabolic Syndrome, Hypertension and Diabetes

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3. National Taiwan University

Background: Our pervious study had reported that hyperuricemia was independently associated with cardiovascular events. However, the association between uric acid and atherosclerosis remains ambiguous. We aim to investigate the association between uric acid and atherosclerosis.
Methods and Materials: we enrolled 2790 subjects aged ≥ 30 years old from CardioVascular Disease FACTor in Two-township Study for this study. Common Carotid Artery Intima-Media Thickness (IMT) was used as the index of atherosclerosis. General linear model and logistic regression were used to assess the association between uric acid and atherosclerosis.
Results: Uric acid was associated with obesity, dyslipidemia, elevated blood pressure, impaired glucose, insulin resistance and IMT (r: 0.12, p<0.05). The subjects with ≥ 9.0 mg/dl of uric acid (hyperuricemia) had significantly higher IMT (multivariate adjusted mean: 0.57 mm) than other groups (0.55 mm for <5, 0.55 mm for 5-6.9, 0.54 mm for 7-8.9 mg/dl), independent of other risk factors. Hyperuricemia (odds ratio: 2.67, 95% confidence intervals: 1.55-4.59) was significantly associated with atherosclerosis in multivariate model. This association remains significantly in low risk population (without metabolic syndrome, hypertension and diabetes)
Conclusion: uric acid was independently associated with IMT in threshold relationship in both general and low metabolic risk population.

OT3-04

A Randomised Controlled Trial Managing Co-Morbid Depression after Myocardial Infarction: Mood-Care

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Background: One in five people suffer from depression after myocardial infarction (MI) or heart attack. While depression impedes recovery, quality of life (QOL) and other outcomes, it continues to remain under-recognised and under-treated. We will conduct a randomised controlled trial of a state-of-the-art, telephone-delivered program (MOOD-CARE) for MI patients exhibiting depression and investigate its effectiveness in relation to depression and components of QOL.
Method: Newly diagnosed MI patients admitted to 5 hospitals in Australia will be screened for depression using Patient Health Questionnaire (PHQ-9) (n= 1619). Those with PHQ9=5-19 (mild-moderately severe depression) at discharge and a secondary diagnosis of depression at 2 weeks will be randomly assigned to a Usual Care (UC) or Intervention (MOOD-CARE) group. MOOD-CARE includes up to 10 telephone counselling sessions over 6 months, delivered by psychologists using Cognitive Behaviour Therapy (CBT) and coronary heart disease (CHD) risk factor management.
Results: It is anticipated that those receiving the MOOD-CARE program will demonstrate significant improvements in depression, QOL, vocational outcomes and CHD risk factors compared with the UC group at 12 months. Primary outcome measures will be depression (Cardiac Depression Scale) and QOL (Short Form-12 [SF-12] and Assessment of Quality of Life [AQoL 6D]).
Conclusion: MOOD-CARE has the potential to improve psychological, QOL and vocational functioning in depressed MI patients. The study will provide valuable clinical and economic information about the value of the program and its translation into the health system.

OT3-05

Client Satisfaction of Services Provided to Infertile Couples in the Gynaecological /Sub Fertility Clinics in Sri Lanka

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Introduction: The outcome assessment in clinical practice needs to include measures of patient satisfaction with the service received. This study assessed client satisfaction among infertile women attending gynaecology/infertility clinics in the Colombo district, Sri Lanka.
Methods: The satisfaction of clinic services of 385 female partners of infertile couples attending gynaecology/subfertility clinics at four Teaching and two Base hospitals in the Colombo district were assessed

using a pre tested interviewer administered questionnaire.
Results: 52.7% of the women were satisfied with the services provided by the clinic and 13.5% were dissatisfied. Clients were most satisfied with politeness of the doctor (92.6%), the way the doctors performed their job (90%) and doctor's kindness (89.5%). Clients were most dissatisfied with explaining things (38.9%), opportunity to ask questions (32.5%) and emotional support from medical staff (31.2%). Clients attending specialised infertility clinics were more satisfied than clients attending gynaecology clinics. Satisfaction towards general functioning of the clinic was significantly higher among educated primary infertile women. Women who were > 35 years, married for > 5 years, had primary infertility and accompanied by the husband were more satisfied regarding the patient centered care provided by the doctors as compared to their respective counterparts. The emotional aspect of infertility was ranked as the most important aspect of care by the majority of clients.
Conclusions: Results suggest approximately half of the clients attending gynaecological /infertility clinics were satisfied with the clinic services with clients attending subfertility clinics being more satisfied than those attending gynaecology clinics.

OT3-06

Treatment Outcome of Kala Azar Patients Treated with Sodium Antimony Gluconate Sag and Miltefosine in Eastern Terai of Nepal

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A cross-sectional comparative study with purposive sampling was performed from the patients' registration book of Sagarmatha Zonal hospital and District Public Health Office Saptari, Nepal and the patients were interviewed at their house holds. The study aimed at to compare the treatment out come like weight gain, remission of fever and skin color of Kala azar patients treated by Sodium Antimony Gluconate SAG and Miltefosine (Zenteris). The highest percent (57%) of patients were from 10-19 years age group. Male were more (59%). Patients were more (51%) from laborer group belonging to farming. Almost all the families were extremely poor. More than half (54%) of the decisions were taken by the father for the treatment place and treating physician. About 60% patients reported the good behavior of nurses and treating physicians. Highest (41%) percent of patients were visiting pharmacist first. The both direct and indirect treatment cost was found to be less for patients treated with Miltefosine in comparison to the SAG group. Initially during the drug distribution week the follow-up visit was more and gradually decreasing. Gastrointestinal side effect was high among the Miltefosine group whereas joint pain, palpitation, rashes was high among the S.A.G group patients. Patients were attracted towards Miltefosine. One case of treatment failure was reported from SAG group. As the outcome of remission of Kala-azar, remission of fever, steady weight gain and improvement in hair colour, appetite, skin colour was reported in both the group with time but more rapid among the Miltefosine group. In this study, Miltefosine seemed to be having better performance for remission of Kala-azar. Further study with clinical and laboratory investigation is recommended in the same community in this regard

OT3-07

Oxidative Stress Byproducts, Antioxidant Activities, Electrolytes and Mineral Status in Stage I and II Human Hypertension

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Objectives: To evaluate the status of oxidative stress, lipid peroxidation, inflammation, lipid profile, electrolytes and minerals in prehypertensives, and stage I and II hypertensive male patients.
Design and Methods: Lipid profile, enzymic and non-enzymic antioxidants, lipid peroxidation, C-reactive protein, electrolytes and minerals were measured in blood of newly diagnosed prehypertensives, stage I and II hypertensives (n=20 in each group) and they were compared with their age matched normotensives.
Results: Elevated levels of lipid profile except HDL-C were observed in stage I and II hypertensive patients. Enzymic and non- enzymic antioxidants were significantly lower while the values for lipid peroxidation and C-reactive protein were significantly higher in prehypertensives, and stage I and II hypertensives. Significant elevation in plasma Na+ concentration was observed while the K+ was decreased. Serum levels of zinc, magnesium, and copper levels were significantly lower in prehypertensives, and stage I and II hypertensives as compared to normotensives.
Conclusions: The result of the study indicated that plasma and serum levels of antioxidants, lipids, C-reactive protein, electrolytes, zinc, copper and magnesium play a pivotal role in the pathogenesis and the development of elevated blood pressure.

OT3-08

A Public Opinion Survey of Attitudes toward the National Policy for An Integrated Biomedical Information System

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Our country's policy to develop the "Bio-Taiwan Policy" encompasses three major elements: centers for excellence in clinical trials; the national health information platform; and the Taiwan bio-bank.This research has compiled the miscellaneous challenges and suspicions of human rights and civil organizations towards biomedical research, as well as their proposals, and analyzed the views of the public toward the national policy for an integrated biomedical information system. In particular, it has carried out a national public opinion survey in order to assist in drafting a direction for policy.This opinion survey utilized telephone interviewing in the period December 2 through 9, 2008, and completed interviews with 2446 persons; this achieves representation of the population with a level of confidence level of 95%, with a sampling error of no more than ±1.98%. The investigation discovered that most of the Taiwan public in concerned for the government's utilization of health information, and realizes the importance of the health information policy for provision of related information to the public. However, in the aspect of how the material is processed, they trust the government more than the research institutions. This seems to mean that the public expects the government to take on the responsibility for management of the materials and information; and under the condition that the public generally does not have trust in the confidentiality maintained by the related organizations, they will however support government utilization of individual private health information if given the precondition . This research concludes with a recommendation to the ELSI section of the Taiwan Biobank, that the government must itself take responsibility for the formulation of policy, rather than delegating it to a research team. Moreover, there must be bottom-up participation by the public, in the creation of relevant ethical governance mechanisms, in order to achieve the potential of recreating Taiwan as an island center of biotech research

Oral Track 4- Emerging & Re-emerging Infectious Diseases

OT4-01

The Development of A Tool to Assess Community Capacity of Sustainable Community-Based Dengue Prevention and Control: A Study in Southern Thailand

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The purpose of this study was to develop and test a new tool (DCCAT) to assess community capacity of sustainable community-based dengue prevention and control of 8 provinces in Southern Thailand. A mixed methodological approach of both qualitative and quantitative methods was data collection. The meaning and 10 themes of dengue community capacity were obtained from a qualitative method by In-depth Interviews of 60 leaders and Focus Group Discussions of 60 non-leaders. The quantitative method was used for developing items and for overall testing of the tool. The initial items were categorized for the leader and non-leader groups, and the item development was according to a range of five choices on a rating scale. This was then followed by a seven expert review panel assessing content validity and pilot-testing for reliability. The construct validity was administered to 964 leaders and 1,248 non-leaders and analyzed by utilizing the Exploratory Factor Analysis (EFA). This resulted in the finalization of the DCCAT of leaders and non-leaders with the DCCAT of non-leaders consisting of 83 items within 11 domains i.e. i) critical situation management, ii) personal leadership, iii) religion capacity, iv) community leadership, v) health care provider capacity, vi) senses of community, vii) communication of dengue information, viii) continuing activities, ix) dengue working group, x) resource mobilization, and xi) needs assessment. Another version of the DCCAT for leaders comprised 14 domains of 115 items, three more domains than the non-leaders, which included leader group networking, leader group and community networking, and community participation.

OT4-02

Retroviral Vector-Directed Sequence-Specific Sirna Suppresses West Nile Virus Replication in Human Neuroblastoma Cells

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West Nile virus (WNV) has been responsible for the largest outbreaks of arboviral encephalitis in U.S. history. However, there is no any specific antiviral therapy currently available for the effectively clinical treatment of WNV infection. To exploit RNA interference as a potential therapeutic strategy, a Moloney murine leukemia virus-based retrovirus vector was tested for effective delivery of siRNA targeting selected viral structural and non-structural genes of WNV into a human neuroblastoma cells (HTB-11). Retroviral vector-mediated expression of sequence-specific WNV siRNA was determined by the co-expression of the indicator reporter gene- eGFP and viral plaque assays demonstrated that transduced cell clones were significantly refractory to the replication of wildtype WNV (new York strain), as compared to untransduced control cells ($p < 0.05$). This experimental finding

correlated with the reduced expression of target viral genes and respective viral proteins by quantitative RT-PCR and Western blot analyses, respectively. Therefore, retroviral vecotr-mediated delivery of siRNA for gene silencing can be used to study the specific functions of viral genes associated with viral replication and also may argue for studies focusing on testing siRNA sequences targeting other viral genes in order to achieve an improved inhibitory effect on WNV infection and potential applications of this therapeutic strategy [supported in part by grants from the National Institutes of Health (S11NS043499 and G12RR003061) and the Hawaii Community Foundation].

OT4-03

Potency of Pandanus Amaryliffolius as Natural Larvacide for Aedes Albopictus

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More than two fifth of people in the world, around 2.5 billion, lives in the dengue fever's endemic area. Its cases in Indonesia always increase every year. There are two species of dengue vector in Indonesia which are Aedes aegypti and Aedes albopictus. Vector control by using larvacide is one of ways to solve dengue problem. Pandanus amaryllifolius was known that could be a larvacide because it contains of alkaloid, saponin, tanin, flavonoid, etc. Unfortunately, the study about its effectiveness is still limited and was tried only to Aedes aegypti. Due to this reasons, I conducted this research to explore the effectiveness of Pandanus amaryllifolius as Aedes albopictus' larvacide, toxicity dose, and the amount of Pandanus amaryllifolius leaves per liter water that can be used as an Aedes albopictus's larvacide. It used an experimental research method based on laboratory. Non-extract of pandanus was treated into instars I/II of Aedes albopictus and it was observed on 24, 48, 72, and 96 hours after a treatment. The result based on the experiment showed that Pandanus amaryllifolius had effectiveness as natural larvacide for Aedes albopictus. LC50 was gotten in concentration of 14,542 ppb. For used it as Aedes albopictus' larvacide, 31 leaves of Pandanus amaryllifolilus per liter of water were needed. It means that natural resources could be developed as natural larvacide which may be safer than the sintetic one.

OT4-04

Dominant Factors Influenced Malaria in Village Area

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Big cattle such as cow, horse and buffalo have been known as cattle barrier for malaria, while others have not investigated yet. The objective of this research was to know the dominant factors of cattle which influenced malaria in village area. The secondary data from 'Riset Kesehatan Dasar 2007" had been used in this researh with total population was 618.593 who lived in village area analyzed using Chi square and Logstic regrression tests. The cattle as the independent variables divided into four catagories, they were poultry (chicken, bird, and duck), big catlle (cow, horse and buffalo), medium cattle (pig, sheep, and, goat), and small cattle (cat, dog, and rabbit). The most dominant factor for protection of malaria was medium cattle (pig, sheep, and, goat) as protective with Odds ratio 0,52 (0,50-0,54). The other cattles had Odds Ratio less than 2, althouh they had p value < 0,05. The medium cattle was the dominant factor influenced malaria in village area, while others did not have effect.

OT4-05

Attribution Theory and Vector-Borne Diseases: The Case of Dengue Epidemics in Taiwan

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Background: Understanding what causes are assigned to negative events by the victims is helpful to predict their subsequent reactions to the event, and provides implications for prevention and control in the future. This study examines layperson's attribution of dengue attack at three levels: (1)individuals infected with dengue, (2)districts remaining high in prevalence, and (3)the Tainan City confronted with an outbreak in 2007. Methods: We interviewed the members of households selected by GIS (geographic information system) assisted random sampling in three high prevalence districts in Tainan City in 2008. Results: A total of 92 valid interviews were accomplished. Major causes assigned by the participants are: (1)individuals: unfavorable environmental hygiene, insufficient self-protective strategies, low immunity, and poor personal constitution, (2)districts: adverse environmental sanitation, and uncontrolled breeding sites, and (3)city: environmental deterioration, climate change, inappropriate insecticide spraying, and virus mutation. Participants who were female, younger, and highly educated were more likely to attribute any level of dengue attacks to climate and environmental factors. The highly educated also uniquely assigned causes of City level outbreak to virus mutation, the district epidemic to local residents' behavior, and the individuals' affliction to victims' behavior, and their poor physical constitution and immunity, but not personal fate.
Conclusions: Interpretations regarding different levels of dengue attack varied, and the types of attribution were also associated strongly with individuals' socio-demographic characteristics. The local government should take residents' attribution patterns into account to implement successful dengue control programs.

OT4-06

Risk Factors Associated with Multidrug Resistant Tuberculosis in Mongolia

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Mongolia is facing the emergence of multidrug resistant TB (MDR-TB) and thus the strengthening of preventive activities and interventions in TB control is a challenge. However, no study has been conducted regarding the risk factors associated with the MDR TB in Mongolia. We conducted a hospital-based case-control study to determine the risk factors for MDR-TB including 114 confirmed MDR-TB cases and 227 people cured from TB. Distributions of age, sex and housing type were comparable in case and control groups. However, there were significant differences in the education ($p<0.001$), marital status ($p=0.022$) and income ($p<0.001$) between the groups. The results of multivariate logistic regression analyses showed that obtaining sufficient information about the treatment (AOR:0.071, 95%CI:0.023-0.217, $p<0.001$) and having BCG vaccine (AOR:0.182, 95%CI:0.086-0.385, $p<0.001$) were the protective factors against the MDR TB whereas not following taking the drugs at home for many days (AOR:2.173, 95%CI:1.257-3.756, $p=0.005$) and having surgery prior to treatment (AOR:15.906, 95%CI:2.811-12.411, $p<0.001$) were the significant risk factors for developing drug resistance. In conclusion, TB patients should receive sufficient information regarding the importance of treatment prior starting and treatment must be performed under direct observation. Patients with decreased immunity who undergone surgery should be strictly supervised during the treatment to prevent from MDR TB.

Oral Track 5- HIV/AIDS, TB

OT5-01

It's A Sin to Be Unattractive: Presentation of Self among the Gay Men in Group Sex Activities and Its Implications for HIV Prevention

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In Hong Kong, group sex activities among gay men are not uncommon. These group sex activities allow gay men to have sex with a few or more new sexual partners in a private setting, thus pose particular risks for HIV transmission. A research to understand the culture of private group sex activities in gay men was conducted. Eighteen participants were interviewed between October 2008 and May 2009 on their risk perception and risky behavior. Implication for sexual risk prevention interventions is discussed.
Results show that the single most important purpose for participants to attend group sex activities is to obtain sexual pleasure. Within the group sex setting, communication, whether verbal or non-verbal, focuses on sexual desire and experiences. Conversation about HIV is a taboo as it destroys the pleasurable atmosphere. At the scene, the principal consideration is bodily attractiveness and the secretive sexual enjoyment. Prevention of HIV is never put in priority.
This article suggests that circulation of meanings of sex and diseases within a broader social sense and the specific setting needs to be considered in HIV prevention. Promoting condoms as a disease prevention tool go against the culture of these private group sex activities. Such messages can hardly persuade participants to practice safer sex. HIV prevention messages would be more receptive to this population if symbol of HIV are dissociated from the messages. Funding agency for HIV prevention in gay men should consider the campaigns that aim to improve gay men sex life without discussing HIV /AIDS.

OT5-02

Early Mortality among Adult HIV Patients after Initiating Haart in Yangon, Myanmar

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This retrospective cohort study aimed to determine the mortality rates and risk factors for early mortality among adult HIV patients after initiating HAART in Yangon, Myanmar. Medical history files in the software were reviewed for patients receiving HAART at 5 MSF-Holland clinics of three townships in Yangon, Myanmar. Adult patients who started HAART with first line regimen between January 2004 and December 2006 were selected and follow up time was censored at 1 year after initiating HAART or at the time of patients died. Of 1282 patients, at baseline, 96.4% had WHO clinical stages 3/4, 86.3% had CD4 count <200 cells/mm3 and 75.0% had tuberculosis. In the first year of HAART, 86 deaths occurred (70.5/1000 person/years) with mortality peaking in the first three months. Cox proportional hazard regression analysis revealed that eleven variables were independently associated with early mortality among adult HIV patients after initiating HAART; elder age (HR 1.03; 95% CI: 1.01-1.06), male gender (HR 1.74; 95% CI: 1.04-2.92), employed patients (HR 2.03; 95% CI: 1.29-3.2), baseline CD4 count <200 cells/mm3 (HR 3.76; 95% CI: 1.81-11.98), BMI <18kg/m2 (HR 2.58; 95%CI: 1.48-4.51), hemoglobin <8g/dl (HR 3.22; 95% CI: 1.8-5.76), TB treatment before HAART (HR 19.71; 95% CI: 4.83-80.50), background tuberculosis (HR 2.23; 95% CI: 1.13-4.41), PCP (HR 3.38; 95% CI: 1.48-7.69), penicilliosis (HR 5.86; 95%CI: 2.1-16.39) and CMV (HR 6.57; 95% CI: 1.9-22.85).
Most early deaths in the first year of HAART occurred among patients with low CD4, poor nutrition, anemia and who were not received TB treatment before HAART.

This mortality would be reduced by avoiding CD4 decline below 200 cells/mm3, considering initiation of HAART in patients with BMI <18 kg/m2 and/or with hemoglobin <8 g/dl and timely treatment of Tuberculosis before HAART.

OT5-03

Survival of HIV Patients in the University of Malaya Medical Centre, Kuala Lumpur

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3. University of Malaya, Malaysia

Introduction: Highly active anti-retroviral therapy (HAART) therapy for HIV patients has been available in Malaysia since 1997. However, there have been very few survival studies Malaysian patients and almost none on those receiving HAART. The aim of this study was to look at the survival of HIV patients in a large teaching hospital in Malaysia.
Methods: A retrospective cohort study was carried out involving a review of HIV/ AIDS patients records in the University of Malaya Medical Centre, from 1986 – 2008.
Results: Eight hundred and forty three HIV patients received treatment during this period. The mean age was 41.5 years. The majority were between 30 to 49 years old (69.2 %), males (77.6%) and of Chinese ethnic origin (68.5%). Of these patients, 123 (14.6%) were treated with a single drug, 591 (70.1%) received double drug regimes and the remainder (129 or 15.3%) received HAART. Patients on HAART survived longer than those not on HAART. Survival was also longer among patients with CD4 count higher than 200 cell/µl at baseline. HAART increased median survival time of patients regardless of CD4 cell count but had a greater survival effect if baseline CD4 count was more than 200 cell/µl. Baseline plasma HIV viral load (> or <100,000 copies) had no apparent effect on survival.
Conclusion: Baseline CD4 and HAART therapy seems to influence the length of survival of HIV patients.

OT5-04

Sexual Behavior of HIV/AIDS Patients Receiving ARV in Surabaya, East Java, Indonesia

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Background. The amount of AIDS patients receiving ARV in Indonesia up to September 2007 attained 76.2%, but the amount of HIV infection/AIDS patient still increases. Based on the data of cumulative transmission mode of AIDS in Indonesia from January to March 2008, sexual transmission are the most common (45.7%), compared with IDU. This study was conducted to observe the sexual activities of HIV infection/AIDS patients. Method. This study was conducted in dr. Soetomo General Hospital in Surabaya, East Java, Indonesia, involving 45 stage III-IV HIV infection/AIDS outpatients treated by ARV, from May to October 2008. Data was collected using questionnaire. Results. During ARV treatment, 42 respondents (93.3%) still practice sexual activities 2-3 times a month in average. Thirteen respondents (27.7%) still practice sexual activities with multiple sexual partners. Nine respondents (21.4%) are homosexuals. The most frequent sexual activities are vaginal intercourse (76.2%), compared with anal sex (23.8%). Only 1 out of 11 respondents who had anal sex did not use condom during each sexual activities, while 4 respondents used it rarely. Conclusion. Several unsafe sexual activities practiced by HIV infection/AIDS patients receiving ARV are found. and will potentially take part to the increase of HIV infection/AIDS in Indonesia, particularly in East Java. Thus, the more effective counseling during ARV treatment is suggested to be implemented.

OT5-05

Trend Analysis of the HIV Epidemic among Female Population in Taiwan

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Since the first female HIV/AIDS case was reported in 1987, there were 1,542 female HIV/AIDS infected patients reported at the end of 2008, and the number accounted for 8.7% of all HIV/AIDS reported cases in Taiwan. The male and female ratio was 10.5:1. In 2005, the new reported Female HIV cases reached the peak at 400. However, from 2006 it showed a downward trend. Till the year 2008, the new case of female HIV infected was less than 100, only 97 cases. Taiwan have provided universal free HIV testing for pregnancy women in prenatal phase since 2005, the HIV prevalence rate among pregnant women between 2005 and 2008 dropped from 2.67 per 100,000 to 1.25 per 100,000. However, in monitoring the epidemic of female sex workers, the prevalence rates in 2004 through 2008 were 0.1%, 0.2%, 0.4%, 0.1% and 0.2% respectively. Comparing with the 1.25 per 100,000 of HIV prevalence rate of pregnant women in 2008, the prevalence rate among sex workers was 8 to 30 times as much. Therefore, it is suggested that the HIV infection of women in Taiwan is controlled quite well when comparing with the world scale infection. However, to prevent extension in the future, Taiwan Government shall adopt active HIV prevention strategy among female sex workers.

OT5-06

Using Cox Regression to Measure Risk Opportunistic Infection of Tuberculosis in HIV/AIDS Patient Who Have Received Antiretroviral in Indonesia

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The person with HIV/AIDS has 6 times risk infected tuberculosis more than person with HIV negative. Recently, the HIV treatment is anti retro viral (ARV). The study has aimed to investigate the risk opportunistic infection tuberculosis with receiving ARV therapy. The study used HIV patients' medical records at Dr. Sulianti Saroso hospital in 2004 – 2007. 148 patients have fulfilled with the criteria study. The collected variables are: Sex, age group, education, transmitting risk factor, period of HIV diagnosis and therapy, decreasing of body weight, AIDS-defining illness, CD4 counts, changes of ARV regiments and absence. The design of this study was retrospective cohort with one year observation. Cox Regression had chosen as a statistics technique.
The result shown that survival probabilities from opportunistic tuberculosis infection are 94,89% (30 days), 69,03% (120 days), 61,18% (210 days) and 13,39% (365 days). The factors associated with survival probability are: male has Hazard Ratio 4,19 (95% CI : 1,00-17,58 : p=0,050), decreased of body weight has Hazard Ratio 3,02 (95% CI : 1,30-6,99 : p = 0,010), AIDS-defining illness has Hazard Ratio 2,14 (95% CI : 1.23-3.71 : p= 0,007) and CD4 has Hazard Ratio 4,32 (95% CI : 0,59-31,94 ; p=0,152).
It is recommended to take attention in male patient with CD4<200 cell/mm3 and have decreased the body weight and occurrences of AIDS-defining illnes

OT5-07

HIV/AIDS Risk Sexual Behavior among Urban Poor in the Northeast of Thailand

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The purpose of this cross-sectional study was to identify the HIV/AIDS risk sexual behavior of urban poor in the Northeast of Thailand. 430 urban poor were randomly selected and responses questionnaires with modified from that of NBSS. Both descriptive and inferential statistics were analyzed. Findings revealed that the average age for these urban poor's first sexual intercourse was 18.3 years old. Most of respondents had first sexual intercourse with girlfriend/boyfriend (81.1%); the occasion was mostly "being together" (58.6%). The condom used during the first sexual intercourses was 17.9%. Only 43.9% of them always used condom when had sex with sex workers. For the latest sexual intercourse, most of them did not use condom (76.7%). Most common reasons for not using condom were 'having sexual intercourse with regular partners is safe' (91.7%). Person who they had sexual intercourse with was the factor associated with condom used practices for their latest sexual intercourse. Condom used when had sexual intercourse with sex workers was statistically significant higher than with spouse (OR=30.4; 95%CI: 13.3 to 97.8), and condom used when had sexual intercourse with friends/same sex was higher than when had sex with spouse (OR=10.3; 95%CI: 4.9 to 21.8). The study concludes that unprotected sexual intercourse was critical among urban poor. Authorities should reorient condom campaign and safe sex for this venerable group.

OT5-08

Stigma and Discrimination of People Living with HIV/AIDS in Malaysia: A Qualitative Enquiry

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A qualitative study, funded by UNDP, Malaysia was conducted to elicit personal perspectives from persons living with HIV (PLHIV) on the consequences of HIV/AIDS on their lives. This paper focused on the stigmatization and discrimination faced by PLHIV. 19 focus group discussions (FGDs), consisting of 94 PLHIV (drug users, infected women from their partners/spouse, heterosexual men, men having sex with men, sex workers, men with refugee status) were conducted. Interviews were tape recorded with permission and transcribed verbatim for data analysis via NVIVO software.
The FGDs revealed that PLHIV are often stigmatized and discriminated in our society, by family members, friends or employers, and healthcare providers. Some have experienced insults, harassment, ridicule and humiliation. Some had been forced, overtly or subtly, to resign from their place of employment. The stigma and discrimination faced by PLHIV forced them to be silent about their illness. Some had to move from one place to another place when their HIV status was known. Some were even kicked out of the house by their family. Breach of confidentiality about PLHIV status in the community also exposed and increased their vulnerability to stigma and discrimination. PLHIV also faced discrimination in the healthcare setting from the health care professionals and social welfare settings, and this can deter them from seeking help and treatment. All of these faced by PLHIV are due to society's lack of understanding and the negative perception of PLHIV. Stigmatizing and discriminatory reactions continue to manifest despite years of information, education and communication (IEC).

Oral Track 6- Nutrition and Food Safety

OT6-01

Should Nutrient Profile Models Promoting Healthy Diets Be 'Category-Specific' or 'Across-the-Board'?

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Background: There is little agreement whether nutrient profile models should treat all foods equally (across-the-board) or as separate food categories with different algorithms (category-specific). We explored the appropriateness of across-the-board and category-specific nutrient profile models as tools for promoting healthier diets.
Methods: Respondents to the UK National Diet and Nutrition Survey were split into four diet-groups based on a dietary quality index. Proportions of foods consumed by each diet-group within each of the food groups (defined according to the UK food guide of Balance of Good Health) were assessed. Average scores of the foods consumed by each diet-group within each of the food groups were also assessed using an across-the-board nutrient profile model.
Results: Compared to the 'least healthy' diet-group, diet of the 'healthiest' diet-group consisted of a significantly greater proportion of fruit and vegetables (12%versus6%), and bread, cereals and potatoes (34%versus26%), and significantly less fatty and sugary foods (16%versus30%). Compared to the 'least healthy' diet-group, the average food scores for both milk and dairy products (1.6versus5.2) and meat, fish and alternatives (4.0versus7.0) were substantially lower (i.e. healthier) in the 'healthiest' diet-group. For other food groups, the differential was much smaller.
Conclusion: 'Healthy diets' of UK adults are characterised by greater consumption of healthy food groups and healthier versions of dairy foods and meat, fish and alternatives. Nutrient profile models designed to promote this diet should be category-specific but with a limited number of categories focused on dairy foods and meat, fish and alternatives.

OT6-02

Differential Determinants of Chronic Malnutrition among Preschool Children: A Cross Sectional Study in Dhaka City

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A cross-sectional study was conducted in two-wards (Ward 62 and 45) of Dhaka City to see the prevalence of chronic malnutrition (stunting) and to identify the factors affecting height for age (HAZ) among pre-school children. It was a two stage random sampling where the survey was done from Mid-February to Mid-March of 2008 on 380 samples. The analysis revealed that the overall prevalence of stunting in Dhaka city was 39.5% in which children were severely stunted 25% and moderately stunted was 14% (P<.001). Bivariate analysis revealed that socio-economic and demographic factors are most significantly associated with stunting. While parents are post graduate, mothers have job & high knowledge of nutrition, mother's height is above 148 cm, familial education is high; child's birth weight is above normal but current weight is above 15kg, then the children are well nourished. From multivariate linear regression model mother's height, mother's knowledge of nutrition, Birth weight and current weight of the children were found most significant factors negatively and independently affecting the stunting of the children.

OT6-03

Assessing Perceptions of A Healthy Diet

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Good nutrition has been linked to reductions in heart disease, cancer, diabetes and all cause mortality. A healthy diet is a complex set of nutritional intake that includes adequate fruit and vegetable consumption, adequate fiber, moderate fat consumption and limited sweets, processed foods, saturated fat and sweetened beverages. The media and popular cultural has portrayed numerous versions of what constitutes a healthy diet. In this study, we asked respondents how often they ate a healthy diet and assessed the relationship with fruit and vegetable consumption, fiber and fat intake, sweetened beverage consumption and eating at fast food restaurants. A random digit dial telephone survey of Hawai'i residents was completed by 3,607 respondents in 2007. Of these, 24.8% reported always eating a health diet, 40.5% often eating a healthy diet, 28.2% sometimes eating a healthy diet, and 6.3% never or rarely eating a healthy diet. Significant linear trends were seen for fat and fiber consumption, eating breakfast, soda consumption and fast food consumption (all p< .05 for linear trend) with the frequency of eating a healthy diet. However, the "always" group was significantly higher than all other groups for both daily servings of fruits (M=3.6 servings vs. 2.9) and vegetables (M=3.8 vs. 3.1). No trend was seen for fruits and vegetables between the never, rarely, sometimes and often groups. A one-item diet screener is linearly related to a variety of nutrition indicators. However, only people who report always eating a healthy diet have high levels of fruit and vegetable consumption.

OT6-04

Using Social Marketing Principals to Increase Fruit and Vegetable Consumption in A Multiethnic Population

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Poor nutrition is a leading cause of preventable morbidity and mortality in the US. Mass media campaigns have tremendous promise for reaching large segments of the population to influence nutrition. However, there is still insufficient evidence in the literature to recommend mass marketing campaigns for nutrition. The majority of Hawaii's multiethnic community is comprised of five major ethnic groups: Native Hawaiians, Caucasians, Japanese, Chinese and Filipino. To be effective, social marketing approaches need to be culturally relevant to these and other ethic groups. This study describes a social marketing campaign designed to increase fruit and vegetable consumption in adults ages 35-55 living in Hawaii. Based on the Theory of Reasoned Action, the campaign used a marketing mix of television, radio, web, newspaper column, supermarket advertising and events and earned media to influence the target population. Random digit dial telephone surveys of 900 adults before and after the campaign were used to measure effectiveness. Results showed a significant ($p < .05$) increase in fruit consumption (0.15 servings per day), but no change in vegetable consumption. Implications of social marketing include the timing and placement of messages and the need for repeated messaging to influence nutrition.

OT6-05

Sea Fish Consuming, Degree Oh Mercury in Hair, and Fisherman Healthy at Surabaya Kenjeran Beach

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The condition of Surabaya Kenjeran Beach effected by Hg pollution, had observed by previous researcher, they suggested that water, sediment, and fishes from Kenjeran Beach were already dirtied by Hg at dangerous level. Fisherman communities is one of the group which have a risk getting effect of methyl Hg, because they usually eat fish from sea that dirtied by Hg. This research took place at Kenjeran district, Bulak sub district, Surabaya. The number of samples for group who affected by Hg are 70 person and controlled group are 45 person. Respondent's hair (research subject) was taken and then observed by Atomic Absorption Spectrophotometer (AAS) No Flame. As result, at the fisherman group who consumed sea fish at average 99.11 g/day, they have degree of Hg in their hair is 256.086 ppb. There are no data of consume sea fish at that time for the controlled group, average degree of Hg in their hair is 0.511 ppb. Healthy disorder sigh (subjective symptoms) which is suspicious as a result of Hg poisoning at this research are kidney, lever disorder, headache, painful, tremor, bleeding gums, and visual disorder. Conclusion is, statistically there is significantly relations between consumed sea fish and degree of Hg in hair, and average degree of Hg in the effected group's hair is higher than the controlled group, but it's not over limit value that recommended by National Research Council (NRC) is 12 ppm, also there is significantly relations between degree of Hg in hair and healthy disorder sigh (subjective symptoms).

Oral Track 7- Nutrition and Food Safety

OT7-01

Antioxidant Supplementation Reduces Sick Building Syndrome Frequencies in Employees in Jakarta, Indonesia (A Community Trial)

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Environmental pollution has become a serious problem in many big cities. Indoor air pollutants are produced by ambient pollutants, cigarette smoke, use of printers, photocopy machines, production machines, and employees. Air pollution and cigarette smoke generates health damaging free radicals and have a negative impact on human health. Nutritional antioxidants have can neutralize free radicals and therefore have the potential to ameliorate the negative effects of pollution on health. This study investigates the effects of intervention with supplement containing antioxidants on the frequency of Sick Building Syndrome (SBS) in employees in Jakarta, Indonesia. The supplement used consisted of vitamins A, D, E, C, B6, B12, folate, selenium, zinc, iron and copper. The research was conducted in 350 employees (30-50 years) in 18 different companies in Jakarta. Eleven companies were picked randomly whose employees were given the supplement to be consumed daily for 3 months. Meanwhile, employees from 7 other companies not consuming the supplement served as the control group. The results showed that 50% of employees experienced SBS but major differences were seen between the supplement and the control groups. The antioxidant supplement was proven to significantly reduce the frequencies: 49% less headache, 45% less watery eyes, 52% less nasal congestion, 27% less respiratory infection and 41% less fatigue. Overall, the results showed that those employees who consumed the supplement experienced 65% less SBS frequencies. In conclusion, 3 month supplementation containing antioxidants resulted in a significant reduction of sick building syndrome frequencies in employees working at high buildings in Jakarta.

OT7-02

The Association between Micronutrient Deficiencies and Body Adiposity: An Underlying Risk Factor for Increasing Obesity in Countries Passing through the Nutrition Transition?

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Background: Countries passing through the nutrition and epidemiological transition undergo rapid dietary and lifestyle changes that produce a 'double burden' of malnutrition and obesity, and related chronic diseases. The deficiency of some micronutrients may be an underlying factor associated with increased body fat deposition that contributes to the increased prevalence of obesity in these countries. The aim of this review is to investigate the association between micronutrient deficiencies, body adiposity, fat deposition and obesity.
Method: This review focuses on the current understanding of the association between micronutrient deficiencies and its relationship with fat deposition and obesity amongst overweight and obese individuals. Insight into the direction of causality will be provided by examining the physiological mechanisms that may underlie this association.
Result: Deficiencies of some micronutrients may be associated with increased fat deposition in the body, which may in turn, be a determinant for obesity. Overweight and obese individuals have lower blood concentrations of vitamins and minerals compared to non-overweight and non-obese individuals. It remains unclear, whether this association represents a causal relationship and, if so, the direction of causality. Childhood nutritional stunting resulting from micronutrient deficiencies is positively associated with increased adult adiposity, a risk factor for obesity. Concentrations of different micronutrients have also been found to be correlated with serum leptin concentration which is associated with differences in body adiposity. These associations suggest that micronutrient deficiencies may be important in determining body adiposity and so be a causal factor underlying the increasing prevalence of obesity in transition countries.

OT7-03

A Modified Mini Nutritional Assessment without BMI Predicts Nutritional Status of Community-Living Elderly in Taiwan

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Background: Malnutrition is common in older adults and nutritional monitoring is important for detecting emerging malnutrition.
Objective: The study determined whether modified MNA (Mini Nutritional Assessment) versions could maintain the predictive ability of the tool in older Taiwanese.
Methods: The study purposely sampled 301 (138 male and 163 female) ≥65-year-old community-free living outpatients who participated in free annual health examination at an area hospital in central Taiwan. A structured questionnaire elicited personal data, lifestyle information and answers to the MNA. Laboratory results from health checkup provided needed biochemical data. Each subject's nutritional status was assessed with the original, MNA-T1 (adopted population-specific cut-points), and MNA-T2 (further eliminated the BMI item and redistributed its score to MAC and CC items).
Results: The three versions identified the same 0.7% elderly malnourished and 16.6, 12.0 and 10% at risk of malnutrition according to the original, MNA-T1 and MNA-T2, respectively. Friedman Test and post hoc analysis indicated that the pattern predicted with the original MNA was different from that predicted with the two modified versions whereas the patterns predicted with the two modified versions were not different from each other.
Conclusion: Adoption of population-specific anthropometric cut-points improves the predictive ability of the MNA in Taiwanese elderly, and the improvement is maintained in a version without BMI (but with adjusted MAC and CC scores). MNA without BMI has greater applicability and can save time for the professional healthcare workers in monitoring nutritional risk of elderly patients.

OT7-04

Iron Deficiency Anemia in Early Infants in An Okinawan Village

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Objective: Infancy is a vulnerable age group for iron deficiency anemia (IDA) throughout the world. It is suspected that main risk factors of early infant for IDA are preterm and low birth weight. In order to confirm this we investigated the results of infant screening test for anemia in an Okinawan village.
Subjects and Method: The subjects were 414 infants aged 4-5 months who received anemia screening test when they had regular municipal health check at in 2006-2007. The regular health check has been provided at community health and welfare center by the municipal governments. Capillary blood hemoglobin concentration was determined by the Cyanmethohemoglobin method. Hb concentration of less than 10.5g/dl was arbitrary defined as anemia in the study. Multivariate logistic regression analysis was carried out as dependent variable of Anemia and the independent variables were gestational age, birth weight, birth order, feeding methods (breast/partially breast/formula-fed).

Results and Discussion: The prevalence of anemia in early infant was 5.8%. Results of multivariate logistic regression analysis showed that the anemia was associated with gestational age.

OT7-05

Attitudes of Hong Kong Population to the Public Health Threat of Melamine-Contaminated Milk

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In September 2008, the discovery of Melamine-contaminated milk produced in China introduced a new food safety risk to Hong Kong's population. The health scare challenged food safety regulations while also revealing how its general public responded to a new population health scare. This study explored the knowledge, perceptions and responses of the population of Hong Kong towards the melamine contamination in milk and dairy foods, including their attitudes towards the government's response. An anonymous population-based cross-sectional telephone survey using a structured questionnaire was carried over a two-week period in October 2008. Assessments of awareness and knowledge, perceived harm, risk and safety of milk products, behaviour change and attitude to government were made by Hong Kong's adult population. Hong Kong adults perceived the melamine scare as a transient and child-related food safety issue and few adults reported changing their milk consumption permanently. Most people approved of the government's response and saw government health bodies as reliable sources of information.

OT7-06

Do Physical Activity and Food Consumption Patterns Associate with the Body Fat among Adolescents in Sri Lanka?

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Purpose: Adolescence is a vulnerable period, to the effects of the nutrition transition evident in urban areas. We compared the mean body fat of adolescents in the district of Colombo, Sri Lanka with their physical activity and food consumption patterns.
Methods: A cross-sectional study was conducted among 418 adolescents aged 11-18 years (39.9% girls) selected using a systematic sampling technique on 12 schools located in the urban sector of Colombo. Body fat percentage was assessed by the modified Siri equation using triceps, biceps, sub-scapular and supra-iliac skinfold thicknesses; overweight by the WHO definition for adolescents using body mass index; physical activity level using the International Physical Activity Questionnaire; and food consumption patterns using a validated 27-item food frequency questionnaire.
Results: The prevalence of overweight was 11.4% among adolescent girls and 14.5% among boys. Mean body fat percentage differed significantly between underweight (mean=13.9; standard deviation=4.6), normal (19.9; 5.8) and overweight (27.1; 4.3) adolescent groups ($p<0.01$). Furthermore, it differed significantly between girls (24.1; 4.6) and boys (16.3; 5.7) ($p<0.01$). Adolescents with an insufficient level of physical activity had a higher fat percentage (20.9; 6.4) compared to those with sufficient activity level (17.9; 6.5) ($p<0.01$). In contrast, only consumption of pulses ≥ 4 times a week was associated with significantly lower body fat (17.1; 6.4) than those who consumed less (19.6; 6.6) ($p<0.05$). Fast foods did not show significant differences.
Conclusions: Insufficient physical activity seems to play a critical role in higher body fat compared to unhealthy food consumption among adolescents in urban areas in Sri Lanka.

Oral Track 8- Substance Use

OT8-01

Prevalence of Addictive Substances (Except Tobacco and Alcohol) among Teenage School Children in the District of Colombo, Sri Lanka

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Introduction: A comprehensive survey on use of cannabis and other addictive substances has not been done in Sri Lanka. There is a paucity of data on prevalence and associated determinants of addictive substance use among the school-going population
Methods: Study included 6000 (response rate 89.2%) students from 202 schools, selected using probability-proportionate-to-size model. Drug usage patterns and psychosocial determinants of drug use were investigated using a pretested structured questionnaire
Results and analysis: Life-time use of at least one substance was seen in 27.9% (N=5353). This was significantly higher among males (37.4%, $p< 0.001$). Chewing betel with tobacco was the most prevalent behavior (males-37%, females-17.2%). Lifetime use of Babul (a cocktail of tobacco, areca-nut and cannabis) was 17.1% among males. Use of cannabis(11%), heroin(1.6%) and cocaine(2.1%) was observed among males. Age of first using cannabis was <15 years in 64% of users. Logistic regression analysis showed that males who smoked and consumed alcohol were more

susceptible to use other addictive drugs. Addictive drug use was significantly higher among children who reported parental smoking($p<0.001$)
Discussion: Lifetime prevalence of addictive drug abuse was higher than expected by available data. Initial exposure to these substances occurred at ages younger than anticipated thus preventive programs should target this population. Smoking and consumption of alcohol increased the risk of later exposure to more dangerous addictive drugs. Parental smoking was a risk factor for drug abuse among children thus should be discouraged.

OT8-02

Assessing the Applicability of Respondent-Driven Sampling Method in Recruiting Illegal Drug Users in Taipei

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Aim: Respondent driven sampling (RDS) is a network-based method specifically designed for studying hidden populations. This study aimed to evaluate whether RDS can be applied in recruiting illegal drug users in Taipei area, where traditional surveys tended to report a lifetime prevalence of less than 1%.
Methods: Three different settings of implementing RDS were conducted in the period between 2007 and 2008, including seeds from 1) community in 2007 (n = 149); 2) community in 2008 (n = 235); and 3) addiction outpatient clinics in 2008 (n = 97). The inclusion criteria for the recruiting were tobacco smoking and alcohol consumption, aged 18 or older, and living in Taipei area. Each recruiter was asked to recruit another 1-3 recruits and all the participants underwent an audio computer-assisted self-interviewing on their drug use experience. RDS Analysis Tool was used for analyzing the proportions and recruitment matrices.
Results: Among the three data sets, each having eight waves of recruitment, the proportions of demographic attributes and drug-use experience attained equilibrium (i.e., between-wave difference < 0.02) around 4 to 6 waves. Comparing the lifetime prevalence estimates across the three data sets, the most commonly used illegal drug was marijuana (12.8%, 12.0%, and 11.6%), followed by ecstasy (12.4%, 11.3%, and 8.2%), and methamphetamine (3.6%, 2.4%, and 4.6%), with that of any illegal drug use being 21.6%, 20.0%, and 23.2%, respectively. Conclusions: This study demonstrates that RDS can attain equilibrium distributions in both sociodemographic features and illegal drug use prevalence estimates from different settings.

OT8-03

The Role of Risk and Protective Factors in Substance Use among Adolescent Students in Cambodia

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Purpose: Cambodia has been affected by a complex set of circumstances that have made its young people particularly vulnerable to disturbing trends of substance use and its consequences. The objective of this study was to examine the relative effects of risk and protective factors in multiple domains on substance use among adolescents in a local city.
Methods: We randomly selected 1,943 students from 11 schools in Battembang provincial town. The examined risk factors included depression, peer delinquency, family violence, and community violence. Protective factors included family support function and school attachment. All expected risk and protective factors were simultaneously entered in a multiple linear regression model.
Results: Of total, 2.6% of the participants used illicit drugs, 47.4% drank at least a full glass of alcohol, and 9.9% smoked at least a whole cigarette during the past three months. After controlling for other covariates, substance use remained significantly associated with risk factors including peer delinquency, depression, family-violence victimization, family-violence witnessing, and community-violence witnessing and some demographic characteristics including age and gender. None of protective factors remained significantly associated with substance use.
Conclusion: The findings lend support to the notion that risk factors were more closely related to adolescent substance use compared with protective factors. Prevention and intervention efforts need to focus on reducing deviant peer involvement, depression, and exposure to family and community violence targeting boys during the early teen years.

OT8-04

Use of Betel Nut Versus Ecstasy in Adolescents: Profile of Psychoactive Substances Use and Behavioral/ Emotional Problems

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Objectives: This study sought to investigate whether adolescent involvement of other substance and behavioral/emotional problems may be differentially associated with betel nut and ecstasy use.
Methods: In a nationally representative sample of school-attending adolescents aged 12–18 years in Taiwan, participants were categorized into four groups: betel nut- and ecstasy-naïve (n=51445), betel nut use only (n=2001), ecstasy use only (n=200), and use of both (n=154). Adolescents' recent behavioral and emotional

problems were assessed using the Chinese adaptation of the Youth Self-Report and then subject to multivariate response profile regression analysis.
Results: Compared with the naïve group, lifetime prevalence of alcohol or tobacco use increased from 12.4% and 30.2%, respectively, to more than 80% for the other three groups, whereas that of any other club drug use (0.2%) increased substantially for the groups of ecstasy only (41.4%) and use of both (58.7%) but only modestly for the group of betel nut only (2.8%). In the multivariate analyses, both the groups of betel nut only and ecstasy only reported more symptoms on the syndromes of Anxious/Depressed, Rule-Breaking Behavior, and Aggressive Behavior, with ecstasy users having more symptoms than betel nut users. Meanwhile, the group of betel nut only experienced more symptoms on the syndromes of Withdrawn, Thought Problems, and Attention Problems, whereas the group of ecstasy only experienced more symptoms on the Somatic Complaints.
Conclusions: Adolescent users of betel nut have a profile of substance involvement and behavioral/emotional problems different from that of adolescent users of ecstasy.

OT8-05

Problems and Impacts of Alcoholic Beverage Consumption of People in Khon Kaen Province, Thailand

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This descriptive cross- sectional study aimed to investigate problems and impacts of alcoholic beverage consumption of the people in Khon Kaen Province, Thailand. The total of 464 samples was systematic randomly selected from the population aged ≥ 15 years and responded to questionnaire interviews. The questionnaire was developed by the researcher with content validity and reliability of 0.85. Descriptive statistics were used to describe the problems where as logistic regression was applied to show the association between factors and alcoholic beverage consumption. The results revealed that majority of the respondents were males (63.6 %) with the average aged of 44.5±15.9 years. Most of them drank alcoholic beverage (83.6 %). Drinkers were found 2 times higher in males than females. Their average aged at first drink was 22.0±8.6 years. At present most of them drank beer (60.1 %) with the median volume of 1,920 liters/year. Most of them drank with friends/ colleagues (86.1%) and mostly drank after work (60.6 %). Impacts of their drinking behaviors were absentee from work/ study (76.2 %), late for work/ study (73 %), legal problems (14.7 %), accidents (13.6 %), destroy properties (11.1 %) and illness (10.8 %). Factors affecting impact of alcoholic beverage consumption were drinking with friends (OR=3.26, 95%CI=1.05-10.14), binge drinking (OR=2.84, 95%CI=1.67-4.84) and frequency of consumption, weekly, (OR=2.45, 95%CI=1.46-4.11).

Oral Track 9- Tobacco Use

OT9-01

Influences of Psychopathological Factors on Adolescent Cigarette Smoking

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Background: Adolescent smokers increased in the past 5 years despite the population of adult smokers decreased. Adolescent tobacco use has attracted research interests. There is a lack of research regarding the association between comprehensive aspects of psychopathological factors and adolescent smoke, especially in Taiwan.
Materials and Methods: This study employed a cross-sectional design, and subjects were selected from high school students with grade 7 to 12 selected from 4 senior and 4 junior high schools in Kaohsiung city during 2003. Smokers were referred by teachers or tutors when smoking behaviors were identified. Non-smoking subjects for comparison were selected from students at the same classes. Data collected included demographic information, parental factors, smoking habits and capacity, and psychopathological factors employing SCL-90-R. 1,264 eligible adolescents completed the survey.
Results: Ages of studying subjects ranged from 11.8 to 19.6 with mean 15.4 years old. Factors related with adolescent smoke including demographic, parental, and psychopathological factors were identified. Father smoke, single parenthood, poor economic status, neglectful parenting style were factors associated with adolescent smoke. After adjust age, gender, grade, and parental factors, psychopathological factors including anxiety (OR:1.20; 95% CI=1.17-1.24), depression (1.20; 1.17-1.23) , obsessive-compulsive symptoms (0.88; 0.84-0.92), interpersonal sensitivity (1.26; 1.22-1.30), hostility (1.25; 1.21-1.30), paranoid (1.04; 1.02-1.07), and psychoticism (1.22; 1.18-1.26) were associated with adolescent smoke with some were positive and some were negative relationships.
Conclusion: Distinction of psychopathological factors was identified in adolescent smokers. The degree of psychopathological factors along with single parenthood, father smoke, poor economic status, and neglectful parenting style influenced the adolescent cigarette smoke.

OT9-02

Exploring the Social Factors of Simultaneous Tobacco and Alcohol Consumption of Adolescents

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Those who consume tobacco or alcohol in first time in their adolescence will have more chances to adopt the illicit, addictive substances in their adulthood than others. Especially, those who simultaneously consume tobacco and alcohol in their adolescents belong to the higher risk group of drug abuse in the future. In order to explore the social factors that influence the simultaneous smoking and drinking behavior of the adolescents, students of 5th to 9th grades in Yunlin county were surveyed by stratified, random, cluster sampling in May 2009. There were 8,130 students investigated by using the self-administered questionnaires, and 351 students who simultaneously consuming tobacco and alcohol were self-reported. Through the logistic regression analysis, we found there are several significant factors influencing adolescents such as: 8th-9th grades, divorced parents, living with relatives, skip-a-generation, moderate income, feeling of family life, sibling relationships, parents smoking or drinking, sibling or friends smoking. Not only the habit of people around the adolescents, but also grandparenting, and sibling relationships are the important factors that make the adolescent to consume tobacco and alcohol simultaneously. For the prevention of adolescent smoking and drinking, it is necessary to develop a resource mechanism to solve the problems of skip-a-generation, the whole family smoking, and the domestic relations.

OT9-03

Tobacco Use among Teenage School Children in the District of Colombo, Sri Lanka

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Introduction: Tobacco use is a major preventable risk factor for diseases. Although data on adult smoking are available there is paucity of data for adolescents. These data are essential in formulation of an effective preventive strategy
Methods: Two staged stratified random sample of 6000 students were selected from 202 schools in the Colombo district. Data were collected using a pre-tested, validated questionnaire. Tobacco smoking, associated factors and socioeconomic correlates were assessed
Results and Analysis: Response rate was 89.2%(n=5351). Male:female ratio 52:47 and the mean age 15.72 years. Exposure to passive smoking during previous week was seen in 51.2%. Tobacco smoking at home was reported in 36.8% and 25.6% reported parental-smoking. Life-time-smoking prevalence was 26.9% among males and 13.3% among females. Smoking was significantly higher($p<0.05$) in the group who reported parental-smoking. Among male smokers, 80% have started smoking at the age of 15 years or younger. Majority(65%) who smoked wanted to quit; 64.7% tried to quit smoking during the previous year and 52% of them were able to refrain for over 6 months. Majority(91%) suggested establishing programs to help quitting and 60% believed that such programs should be based in schools
Discussion: The prevalence of smoking and passive-smoking was much higher than previously reported data. Parental-smoking was associated with high risk smoking among adolescents. Intentions to quit was high among smokers therefore more support should be made available at school level to facilitate quitting.

OT9-04

Factors Associated with Success or Failure from the Quit Smoking Attempts

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Tobacco smoking is responsible for the premature death of approximate 10,000 Malaysian each year. More than half of Malaysian smokers are willing to quit smoking. However, the main barrier for decision to quit smoking is addiction to nicotine. The quit smoking clinics therefore play important role in assisting their client to quit smoking. However, there are largely unknown about factors determining to quit smoking successfully. The aim of the study was to investigate the success rate of quit attempts and factors associated with success or failure from the quit attempts in Tangling quit smoking clinic, Kuala Lumpur. The smokers who enrolled the Tanglin quit smoking clinic from 2005 to 2008 were included in our study. There were altogether 495 participants in our study. Socio-demographic information, history of smoking and health status of participants were extracted from the patients' records. All data were processed and analysed by using STATA 9. Average success rate of quit smoking attempt was about 40%. Multivariate logistic regression was done in order to identify the factors determining to quit smoking successfully. The factor "being Malay""previous experience of quit attempt""having high blood pressure" and "regular attendance of clinic" had positive association to quit smoking successfully. In contrast, clerical staff had negative association to quit smoking. People who started smoking in their teenage had high chance to be relapse.

OT9-05

Project Quit Tobacco International 2: Building A Tobacco Cessation Network in India

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This presentation provides a brief overview of research and training activities to be undertaken during the second phase of Project Quit Tobacco International (QTI 2). In order for tobacco cessation to become normative medical practice, a proactive research and training environment will need to be established. During QTI 2, selected medical colleges will be supported in their efforts to train a next generation of practitioners to routinely ask patients about tobacco use and encourage cessation. Selected schools will become the hub for recruiting and training a cohort of tobacco researchers who will form a tobacco cessation research network (TCRN). As a first step to mobilize TCRN, QTI 2 will foster cessation efforts among health professionals committed to the management of patient populations dramatically effected by tobacco (e.g. diabetes patients). After providing in-service training on the latest research related to tobacco use and culturally sensitive approaches to cessation, health professionals will be invited to participate in research designed to identify the most effective means of assisting patients to quit tobacco use in real world situations. Cessation activities will also be extended to the community through promoting cessation as a family and women's health issue and an occupational health right. The specific aims of QTI-2 are to:

1. Expand knowledge capacity through dissemination of a model tobacco education curriculum for medical schools.
2. Create a critical mass of five medical schools modeling integrated tobacco education and engaging in tobacco-related research within two states of India and Indonesia
3. Involve partner medical schools in tobacco-related community-based research to heighten public awareness of the benefits of tobacco cessation and provide research training opportunities for tobacco cessation researchers.
4. Build capacity in tobacco-related research by creating a tobacco cessation research network that supports collaborative research and sharing of the research experiences within each project state.

OT9-06

Prevalence of Smoking and Its Determinants among College Students

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This cross sectional study was conducted in a higher secondary college to determine the proportion of current smokers and its determinants among the college students. A total of 719 students were interviewed using self administered questionnaire. The number of male respondents was 413 and female was 306. The overall mean age of the respondents was 17.1±1.5 years. About 22% were current smokers. Among the total smokers 159, 133 (83.6%) were male and 26 (16.35%) female smoker. Mean age of the smoking initiation was 13±2.9 years. The mean difference of age of smokers and nonsmokers was statistically significant ($p<0.001$). Among the smokers, 35% from urban and rest were from rural; the difference was statistically significant ($p<0.01$). A statistically significant association was found between sex and parental education ($p<0.001$). There was statistically significant association observed between sex and mean monthly family income ($p<.05$). The reason for initiation of smoking as mentioned by the respondents were due to peer pressure (50%) followed by curiosity (34%), to avoid anxiety and tension (27.7%), feeling of maturity (13.8%), symbol of manliness (8.8%), unhappy family environment (8.2%). When logistic regression was done, age and sex of the students were found significantly associated with smoking ($p<0.001$) indicating smoking was 3.58 times higher among the students with aged 18 years and 5.37 times higher among the students aged 19 years and above.

Oral Track 10- Maternal and Child Health

OT10-1

Testing the "Epidemiologic Paradox" of Birth Outcomes among Asian Immigrant Women in Hsin-Chu County, Taiwan

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Background/Purpose: This retrospective study investigates whether immigrant status confers a protective effect on birth outcomes and whether this effect varies across racial/ethnic subgroups in Hsin-Chu County, Taiwan.
Methods: A total of 30,770 singleton birth certificates from January 1, 2002 to July 31, 2007 were analyzed using ANOVA and logistic regression with P 0.05. Outcomes included low birth weight (LBW, < 2,500g), high birth weight (HBW, > 4,000g), preterm (< 37 weeks) and stillbirth. Covariates included maternal age, year of delivery, mode of delivery, medical care institutions, infant sex, congenital birth defect and lunar month of delivery. Five models were designed for various analyses. The reference categories included non-immigrant, non-aboriginal Taiwanese and non-Chinese-speaking immigrant.
Results: Preterm rate ranged from 6.3% among Mainland Chinese to 13.5% among aboriginal Taiwanese. LBW rate ranged from 4.3% among Mainland Chinese to 17.3% among aboriginal Taiwanese. HBW rate ranged from 1.2% among aboriginal Taiwanese to 3.4% among Mainland Chinese. Stillbirth rate ranged from 0.2%

among Indonesian to 0.7% among aboriginal Taiwanese. Adjusted OR decreased among Mainland Chinese (preterm OR 0.77, LBW OR 0.64) but increased among aboriginal Taiwanese (preterm OR 1.69, LBW OR 2.69, stillbirth OR 2.28). HBW rate was significantly high (OR 1.77) among Mainland Chinese. Chinese-speaking immigrants showed significant difference in LBW (OR 0.64) and HBW (OR 1.88) compared with non-Chinese-speaking immigrants.
Conclusion: Epidemiologic paradox and heterogeneity of birth outcomes were observed among immigrants in this study. However, aboriginal Taiwanese constituted the subgroup of the highest risk. Further research is needed to identify the determinants of birth outcomes.

OT10-2

Breastfeeding Practice and Associated Workplace Factors among Working Mothers in An Industrial Area in Malaysia

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Women's involvement in work sector had been increasing trend in the past decades. The increase had invariably affect women's ability to practice breastfeeding. This study aims to determine the prevalence and factors at work that influence breastfeeding practice among working mothers in an industrial district in Malaysia. The study was a cross sectional study involving working mothers with a child aged 3 month to 1 year who visited all health clinics in the district. A face to face interview using a structured questionnaire was conducted from July to September 2006. There were 290 subjects recruited in the study with 48.6% of the working mothers were still breastfeeding at the time of the study. Forty one (41%) percent of the mother's who was not breastfeeding indicated work as a factor for stopping breastfeeding. The study also showed that race, type of employer such as government or private sector, maternity leave and breastfeeding facilities at the workplace were significantly associated with breastfeeding. After controlling for confounders, short maternity leave and breastfeeding facilities at workplace were found to be significantly associated with breastfeeding. Breastfeeding practice among working mothers can be improved with cooperation and support between the employer, the authority and the mother herself. Efforts by employers in supporting breastfeeding practice through a more mother friendly work place such as providing facilities for breastfeeding are important to encourage working mothers to continue breastfeeding once they returned to work.

OT10-3

Hepatitis B and Breastfeeding in Zhejiang Province, PR China

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Objective: To study infant feeding methods in hepatitis B positive mothers in Zhejiang Province.
Methodology: A cohort study was undertake in Hangzhou in Zhejiang Province. A sample of 638 mothers were recruited at birth from the city of Hangzhou and were followed up until their infants were six months of age.
Results: Chronic hepatitis B is a continuing public health issue in pregnant women. Breastfeeding is the foundation of infant nutrition and sets the scene for lifetime health and is important for all mothers. In the Hangzhou cohort of 638 mothers, 38 were identified as Hepatitis B positive, a rate of 6.0%. All of the infants of the hepatitis B positive mothers were fed on formula immediately after birth while their breastmilk was tested for virus transmission and their infants were vaccinated. At one month of age 61.8% of the hepatitis B mothers were breastfeeding compared to 92% of the remainder of the cohort. The rates at 3 months were 60.6% and 89% and 6 months 45.5% and 64% respectively. The Hazard Ratio for hepatitis B positive mothers discontinuing breastfeeding before six months was 3.69 (95% CI 2.28,5.98)
Conclusion: The WHO recommends that all mothers who are hepatitis positive breastfeed their infants and their infants are immunised at birth. In this study breastfeeding rates of hepatitis B positive mothers were substantially less than the other mothers.

OT10-4

Does Antenatal Care Influence Birthing Decision?

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Antenatal care is promoted to encourage women to have appropriate treatment when pregnancy complications occur, and in labor to be assisted by a skilled birth attendant, to reduce the number of maternal and neonatal deaths. However, antenatal care's contribution in preventing maternal death is controversial as the model that informs such care cannot predict the main causes of birth outcome. In this paper, we examine the association between antenatal care and women's birth decision. This study was conducted in Bantaeng, a district in South Sulawesi, Indonesia, with high maternal mortality ratio. A cross sectional survey was carried out among 485 women who had delivered babies from March – June 2008, which collected data on antenatal care, place and type of delivery assistance, reproductive and socio demographic characteristics. This study found that 46.2% of women were assisted by skilled birth attendants. The majority (90.7%) of deliveries were conducted at

home where 59.3% assisted by traditional birth attendant. Household wealth was the only variable associated with institutional delivery. Women who had contacted and regularly attended antenatal care were more likely to be assisted by skilled birth attendant. However, antenatal care did not influence place of delivery, and age did not influence decision-making regarding place or type of delivery assistance. Feel safe, low cost and close distance from traditional birth attendant's house were the major reasons for choosing traditional birth attendant. Antenatal care did not influence women to deliver at a formal health service. However, it promoted skilled birth attendance at home deliveries.

OT10-5

Prevalence of Primary and Secondery Infertility in Sri Lanka

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Introduction: The population growth rate of Sri Lanka is in decline and the contraceptive prevalence rate is in rise. The level of infertility has both demographic and health implications. This study aimed to determine the point prevalence of primary and secondary infertility and to describe characteristics of infertility among fertility-impaired couples resident in the Colombo district.
Method: 3400 currently married women in the reproductive age resident in the Colombo district were selected using two staged stratified cluster sampling. 100 clusters with 34 respondents in each were selected with probability proportionate to the size of the reproductive age population. Information was collected using a pre-tested, pre-coded, structured interviewer administered screening questionnaire which used the WHO definition of infertility with a one year exposure period. The response rate was 96.97 %.
Results: The point prevalence of the primary and secondary infertility was estimated to be 5.52 % (95 % C.I. – 4.72 % - 6.28 %) and 10.07 % (95% C.I. 9.05 % –11.13 %) among currently married women in the reproductive age group in the Colombo district respectively. The prevalences increased with advancing age at marriage of women. The highest prevalence of infertility was observed among women who were educated beyond A/L and employed. The prevalence of secondary infertility was significantly higher among the urban residents.
Conclusions: Secondary infertility is estimated to be more widespread in the District of Colombo than primary infertility. Age at marriage, level of education and employment status were significantly associated with the level of infertility.

OT10-6

Prolonged Breastfeeding Reduces Risk of Breast Cancer in Sri Lankan Women: A Case-Control Study

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Objective: to assess the association between duration of breastfeeding and the risk of breast cancer in Sri Lankan women.
Methods: We conducted a case-control study in women aged 30-64 years in selected health care facilities in the Western province. A total of 100 recent cases of breast cancer and 203 controls (age and parity matched) were included. Detailed information regarding breastfeeding, menstruation, reproductive factors, passive smoking and other confounders was collected using a structured questionnaire. Adjusted odds ratios and 95% confidence intervals were calculated using multiple logistic regressions.
Results: Multivariate analysis found that those women who breastfed for ≥24 months during lifetime had significantly lower risk of breast cancer than those who breastfed for less than 24 months (OR=0.40; 95%CI=0.22, 0.73). Compared to 0-11 months of lifetime breast feeding, there was a 66.3% reduction in breast cancer risk in women who breastfed for 12-23 months, 87.4% reduction in 24-35 months and 94% reduction in 36-47 months categories. The significant factors associated with increased risk of breast cancer were: post-menopausal women having an abortion in the past and exposure to passive smoking.
Conclusions: prolonged breastfeeding significantly reduces the risk of breast cancer and this protective effect was supported by a dose-response relationship. Risk due to passive smoking should be emphasized in anti-smoking programmes.

OT10-7

Factors Affecting the Infant Feeding Practices among Myanmar Migrant Mothers in Mahachai District, Samut Sakorn Province, Thailand

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World Vision Foundation of Thailand, Thailand

This study examines the infant feeding practices and its associated factors among Myanmar migrant mothers who have under two years old children in Mahachai district, Samutsakorn Province, Thailand. In this study, data was collected in three selected communities, Thetchalong, Koh Samut and Taladkung of Mahachai district. Most of the mothers (99.26%) breastfed their children, exclusive breastfeeding rate is 15.56% and 91.11% of mothers gave colostrums to their babies. The initiation time of breastfeeding within half an hour was practiced by 68.15% of mothers. The median duration of breastfeeding is 12 months. Among the breastfed

mothers, 82.22% of them practiced early introduction of complementary food. The findings showed the association between father's occupation, antenatal care, level of maternal knowledge and infant feeding practices on exclusive breastfeeding practices. Therefore, these findings recommend improvement in infant feeding practices related to exclusive breastfeeding and timely introduction of food. Intervention for health providers such as international non profit organization to improve knowledge of mothers on infant feeding practices is much needed and should be in Myanmar language.

Oral Track 11- Maternal and Child Health

OT11-1

Risk Factor of Maternal Death in Bantaeng District South Sulawesi Indonesia 2005-2008

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Indonesia is one of the country which has not been escaped from the burden of maternal mortality rate (MMR). According to Indonesian health demography survey in 2007, Maternal Mortality Rate (MMR) in Indonesia reach 248/100.000 of live birth. This Study aimed to know the risk level of maternal age, maternal parity, birth attendants, and K4 Coverage of antenatal care(ANC) to maternal mortality incident. Study method used was analytical observasional study with case control design and be stronged with qualitative approach by indepth interview. This study compared case groups of all mother undergoing maternal mortality incident and control groups which didn't undergo maternal mortality incident. The samples as many as 130 respondens with ratio 1 : 4, 26 cases and 104 controls. Datas was collected primarily then analyzed by using odds ratio (OR) statistic test. The result of bivariat statistic showed that maternal parity, birth attendants, K4 coverage of antenatal care (ANC) had a significant association as risk factors of maternal mortality incident with the value of each variables namely : maternal parity (OR 2,728 ; 95%CI 2,124-4,503). birth attendants (OR 3,080 ; 95%CI 2,124-4,503), K4 coverage of antenatal care (OR 3,600; 95% CI 1,446-8,964). While maternal age variabel with value (OR 1,456 ; 95% CI 0,541-3,919) didn't have a significant association to maternal mortality incident. Maternal parity, birth attendants, and K4 coverage of antenatal care are risk factors for maternal mortality incident, while maternal age didn't have a significant association to maternal mortality incident.

OT11-2

Will Climate Change Affect the Rate of Low Birth Weight?

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2. University of the Ryukyus, Japan

Objective: To review the literature on the possible effects of climate change on the rate of low birthweight in APACPH countries.
Methodology: There is considerable potential for climate change to effect public health in many ways, for example the displacements of populations, increased rates of infectious disease and changes in food supply have been previously documented. A literature review was undertaken of trends in low birth weight (LBW) rates that have occurred in the past three decades was undertaken to find possible trends related to global warming.
Results: A review of the literature and of the trends in low birth weight rates showed a correlation in an ecological study between warmer temperatures and higher LBW rates, after adjusting for common confounding variables. A review of LBW rates over the past 25 years has shown a trend towards increasing rates in all of the OECD countries where accurate data is available. For example in Japan the LBW rate has almost doubled in 25 years. There is a possibility that at least part of this change may be related to climate change.
Conclusion: Climate change has been known to have detrimental public health effects. However a new possible effect is an increase in low birth weight rates. If this does eventuate it has serious implications for public health through increasing infant mortality and later in life an increase in chronic disease through the operation of the Developmental Origin of Adult Disease hypothesis. Further research is required to confirm or disprove this trend.

OT11-3

Opposing Trends in Low Birth Weight Rates in Japan and Korea

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2. University of the Ryukyus, Japan
3. Seoul National University, South Korea
4. Murdoch University, Australia

Objective: To review the changes in low birth weight rates in Japan and Korea.
Methodology: The low birth weight (LBW) rates that have occurred in the past three decades in Japan and Korea were examined to find trends and causal factors.
Results: During the past three decades there has been a steady decline in the LBW rate in Korea from 9% to 4%. Since 1960 the infant mortality rate (IMR) has declined from 90 to 4 per 1000 live births. By contrast the rate of LBW in Japan has increased by 80% since 1980 to reach 9.7%. At the same time the IMR in Japan has declined continuously to a low of 4 per 1000 live births in the most recent reported year. Recently Korea has had increasing LBW rates. Both countries enjoy a high standard of living, but have high rates of smoking for developed countries. Korea has a higher rate of caesarean section delivery than Japan. Japanese obstetricians advise

strict weight control for mothers in that country, limiting weight gain to only 8kg. Conclusion: The low birth weight rate is an important public health indicator. It is a factor in non-communicable disease rates later in life thought the Developmental Origins of Adult Disease hypothesis. Usually higher LBW is associated with increasing infant mortality and this is the case in Korea, but not in Japan. The increase in the LBW in Japan should be addressed and the recent upturn in rates in Korea should be monitored.

OT11-4

Seroprevalence of HBV in Immigrant Pregnant Women and Coverage of HBIG Vaccine for Neonates Born to Chronically Infected Immigrant Mothers in Hsin-Chu County, Taiwan

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This study was carried out to assess the prevalence of HBsAg positivity and coverage rate of antenatal HBV screening among immigrant women. In addition, the extent of administration ofHBIGplusHBvaccine #1 to neonates born to chronically infected (HBeAg-positive/HBsAgpositive) mothers was assessed. All pregnant women residing in Hsin-Chu County, Taiwan and giving birth during 2004–2006 were recruited. Among all 16926 cases, the prevalence of HBsAg positivity according to their ethnicities was Mainland Chinese, 11.0% (68/616); Indonesian, 3.5% (15/426); Vietnamese, 7.4% (42/568); aboriginal Taiwanese, 20.6% (109/530); and non-aboriginal Taiwanese 11.5% (1536/13368). Among the HBsAg carriers, the prevalence of HBeAg positivitywas Mainland Chinese, 52.9% (36/68); Indonesian, 53.3% (8/15);Vietnamese, 45.2% (19/42); aboriginal Taiwanese, 47.7% (52/109); and non-aboriginal Taiwanese, 26.8% (411/1534). With non-aboriginal Taiwanese as the reference category, results of multiple logistic regression revealed the healthy immigrant phenomenon in the HBsAg carriage state among pregnantwomen from Indonesia (OR 0.30; CI 95%: 0.18–0.50) andVietnam (OR 0.68; CI 95%: 0.49–0.93). On the contrary, among chronically infected mothers, Mainland Chinese showed the highest risk for HBeAg positivity (OR 2.79; CI 95%: 1.7–4.58). More efforts should be made to improve HBV infection among aboriginal Taiwanese pregnant women who were more vulnerable to HBsAg positivity (OR 2.15; CI 95%: 1.72–2.68) and HBeAg positivity (OR 1.93; CI 95%: 1.28–2.90). Age was another independent predictor for HBsAg positivity (OR 1.02; CI 95%: 1.01–1.03) and for HBeAg positivity among chronically infected mothers (OR 0.93; CI 95%: 0.91–0.96). The coverage rates of antenatal HBV screening and HBIG plus HB vaccine #1 showed no difference among these multiple ethnic subgroups. In 2006, the overall coverage rate of antenatal HBV screening was 98.7% (5546/5639), with the individual rate being Mainland Chinese, 100% (267/267); Indonesian, 97.2% (106/109); Vietnamese, 99.5% (201/202); aboriginal Taiwanese, 97.0% (196/202); and non-aboriginal Taiwanese, 99.8% (4776/4785). The administration rate of HBIG plus HB vaccine #1 was 100% for all ethnic subgroups.

OT11-5

Attitudes towards Contraception and Abortion amongst Burmese Migrant Workers in Thailand: A Qualitative Study of Community Knowledge Attitudes and Practices on the Thai-Burma Border

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Background: The maternal mortality rate is estimated to be at least three times higher for the displaced population along the Thai-Burma border than within Burma, making reproductive health issues particularly important for this population.
Aim: To investigate the knowledge and attitudes towards contraception and abortion amongst Burmese migrants and the factors that influence women쏙 choices regarding family planning.
Methods: Migrant women (N=97) attended focus groups in four different locations along the Thai-Burma border in Mae Sot area. Purposive sampling was used in order to include migrants with varying degrees of access to health care. Two groups were carried out at medical facilities and two groups in remote locations.
Results: The majority of women understand that contraception was used to prevent unwanted pregnancy; however, women at the remote sites do not have information about how to access contraceptive services, which stops them from being able to make informed decisions concerning their reproductive health. A concern preventing many women from using contraception was the perceived side effects that the majority has heard about. In addition, despite women being aware of the serious potentially life threatening complications of abortion, many women acknowledge that illegal abortion is a commonly used method to prevent unwanted pregnancy.
Conclusion: It was clear in this study that women desperately want access to family planning and therefore this would be well received in cross-border health programmes. Alternative strategies are urgently needed to increase access to information on contraception use among migrant populations.

OT11-6

Air Pollution and Upper Respiratory Infection Cases among Children Under Five Year in Surabaya

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Surabaya has many activities related to motor vehicle that creates emission of many air pollutants to be

released into ambient air and take as a part of air pollution. The polluted air affect people health, particularly cause disorder in normal function of lung, nervous system, blood vessel, eyes and skin irritation. The aim of this research was to identify air pollution and upper respiratory infection (URI) cases among children under five year in Surabaya. This research was an observational study with cross sectional method. Research sample was children of 1 - < 5 years old and purposive sampling method was employed to determine this sample, with inclusion criteria: reside surround Air Pollution Standard Index and lived near air pollution source. Data collection was carried out with questionnaire and observation form. Collected data then was analyzed using descriptive analysis and prevalence ratio to distinguish the risk of upper respiratory infection between children who lived near from air pollution exposure and lived far off exposure. The research showed that more than a half of children who has upper respiratory infection were children of 12- 24 months old age. The children who lived in room with improper temperature had 1.34 times more likely (RP = 1.34) to suffer from URI compared to who lived in appropriate temperature's room. The children who lived in smoking exposure environment had 1.35 times higher risks to develop URI compared to children without this exposure. The result of measurement for ambient air quality for the last one year showed that air pollution in Surabaya is at moderate level. Based on that result, it is suggested that tree planting is needed to absorb air pollutant. To avert URI cases among children, it is better to keeping house in cleaning condition and maintaining good air to circulate inside house everyday.

OT11-7

Factors Related to the Incomplete Immunization among 1-5 Years Myanmar Migrant Children of Mahachai District, Samut Sakorn Province, Thailand

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A cross-sectional study was conducted to describe the general characteristics of parents and children, family support and knowledge and perception of mothers on the incomplete immunization of children, from 28th Jan to 2nd Mar, 2007. The study tried to find out the relationship between these variables and the incomplete immunization of children. One hundred and fifty mothers who had 1-5 years children were chosen from three communities, interviewed by structured questionnaires and analyzed by using chi-square. The result in this study showed that 92% of mothers did not seek the antenatal care services. The commonest age of children in this study was 2 (34.7%). Mostly, they had one child in their family (34.7%) and majority of the children (81.3%) was delivered at home by traditional birth attendants. The 88% was incompletely immunized children and 64% received the immunization by mobile clinic. BCG and Measles immunization rates were quite high with 88% and 86.7% respectively while DTP and OPV complete 3 doses were very low with 27.3%.The results indicated that the children with incomplete immunization were significantly related with prenatal care (p = < 0.001), place of delivery (p = 0.001), family support (p = < 0.001), knowledge of mothers (p = < 0.001) and perception of mothers (p = < 0.001). Based on finding, more midwives and nurses should be trained for domiciliary visits to migrants, and health education activities by health volunteers should be promoted in the communities of migrant people.

OT11-8

Prepregnancy Hemoglobin Concentration and the Risk of Stillbirth, Preterm Birth, and Low Birthweight

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3. Yonsei University Medical College, South Korea

Introduction: The effect of maternal hemoglobin concentration on the risk of stillbirth, preterm birth and low birth weight was controversal.
Methods: Population based retrospective cohort study was conducted on 71,282 mothers who received health examination between 1997-1999, and delivered a singleton live baby in 1999 or a singleton stillbirth in 1999. Rate and odds ratio of stillbirth, preterm birth, and low birthweight in accord with the level of pre-pregnancy hemoglobin level was examined. Results were adjusted for maternal age at delivery, pre-pregnancy body mass index, parity and National health insurance premium using logistic regression model.
Results: Adjusted odds ratio of stillbirth was found to be 1.86 times higher for mothers of less than 100g/L hemoglobin concentration(95% CI, 0.82-4.25) and 1.81 times higher for mother of 100-109g/L(95% CI, 1.05-3.11) compared with those of 120-129g/L. Adjusted odds ratio of preterm birth was higher among mothers of <100g/L(Odds ratio: 1.47, 95% CI, 1.03-2.11). Adjusted odds ratio of low birthweight was 1.82, 1.38, and 1.19 times higher for the mothers of <100g/L(95% CI, 1.28-2.60), 100-109g/L(95% CI, 1.07-1.78), and 110-119g/L(95% CI, 1.02-1.39), respectively than for those of the 120-129g/L pre-pregnancy hemoglobin level. The risk was not significantly elevated with mothers of high hemoglobin concentration.
Conclusion: Low maternal pre-pregnancy hemoglobin concentration rather than high hemoglobin concentration increases the risk of stillbirth, preterm birth and low birthweight.

OT11-9

Risk Factors of Measles Outbreak on Under Five Children in Tuladenggi Public Health Center, Gorontalo City, Indonesia

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The outbreak of measles was happened in Gorontalo province at 2007 where the increasing of new case was 5 times, attack rate 45,9% and CFR 2,4% from 542 case. Three hundred and thirty two cases were found in District of Gorontalo, distributed in 18 villages with the highest outbreak (155) were meet in the working area of Tuladenggi Public Health Center. Most of them were child under five years old which was 92. The aim of this study was to determine risk factors of measles outbreak to under five children in working area of Tuladenggi Public Health Center. This study was a case control design. One hundred and fifty eight samples were taken by purposive sampling where age and residence of samples were matched. Data were analysed with Odds Ratio (OR) and linier logistic regression. Results of study indicated that risk factors outbreak of measles in child under five years were immunization state (OR= 33.53), under nutrition (OR= 4.49), parent's education (OR= 2.44) and family income (OR = 2.51). Based on this study, we concluded that the main factor of measles outbreak was due to incompleteness of measles vaccination. It is suggested that the full coverage of measles vaccination was needed in order to prevent such outbreak.

OT11-10

Child Growth Acceleration Issues

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It has been found that the course of Mongolian child growth trends to stabilize and slow down in last 10 years. The research was done to study child growth and the course of acceleration of school children. Cross-sectional study design was used to evaluate the acceleration of the child growth in comparison with data of last 40 years. Anthropometric data were collected from a total of 2075 male and female school children and adolescents from 1st to 11th grades from Ulaanbaatar city during the 2007/8 academic year using anthropometric instruments. Body growth and development was processed by School of Medicine and evaluated according to the Ministry of Health approved United Evaluation and Standard of Child Growth and Development. Starting from the age 8, girls were caught up with boys. First cross section was at age 8; while the second cross section on the growth curve was at age 14.5 which was related to the transition to the puberty. At age 17, boys caught up with girls and became taller by 10-15 cm. Picture of weight was similar as height. There were a tendency of transition of rapid growth process from age 11 to age 10 ten in girls and from age 13 to age 12 in boys in relevance to the age of puberty onset. In conclusion, Child growth acceleration in Mongolia was the highest between 1960 and 1990, but it declined in recent years.

Oral Track 12- Non-Communicable Diseases (GIS)

OT12-1

Obesity in Mongolian Adults: Mon Heart Cohort Study

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Introduction: Obesity and overweight have become common health problems globally including Mongolia. The objective of this survey was to examine the epidemiology of obesity in the urban population of Mongolia.
Design: Population-based cross-sectional surveys. A random sample of adults 31-90 years underwent comprehensive interviews and measurement of their weight, height, and waist circumference (WC).
Participants: A probability sample of 1214 men and women aged 31 to 90 years was selected from the each district. Anthropometry was performed on 1214 subjects. Outcomes of interest were obesity (body mass index [BMI] > 30 kg/m2), high-risk WC (men 90 cm; women 80 cm), and high risk of disease co morbidity (from BMI and WC criteria).
Results: Total, 1.214 people participated (80% response). Women had higher rates of obesity (32.6% vs. 26.2%), high-risk WC (61.9% vs. 13.9%). Abdominal obesity was likewise higher in women and increased with both age and BMI. Although total plasma cholesterol levels increased only modestly with BMI, levels of low density lipoprotein (LDL) cholesterol and triglycerides and the ratio of total cholesterol to high density lipoprotein (HDL) cholesterol increased steadily, while HDL-cholesterol decreased consistently with increasing BMI. High total cholesterol levels (greater than or equal to 5.2 mmol/L) were more prevalent among people with high BMI, especially those with a high WHR.
Conclusion: Obesity is highly prevalent among adult Mongolians. Public health interventions must target this group, particularly women.

OT12-2

Binge Drinking and Digestive Cancer Mortality in Korean Men: A Kangwha Cohort Study

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Background: Alcohol consumption has been known to be related with risks of oral cancer, esophageal cancer, liver

cancer, colon cancer, and breast cancer. In this study, we aimed to examine the association between binge drinking and digestive cancer mortality among Korean men.
Methods: This study followed up a cohort of 2,624 residents in Kangwha County, who were aged 55+ in March 1985, for 20.8 years up to December 31, 2005. We calculated hazard ratio of cancer mortality by experience or frequency of binge drinking using the Cox proportional hazard model. Binge drinking was defined as having 6 or more drinks on one occasion.
Results: Binge drinkers who drink daily had an increased risk of mortality from digestive cancer (hazard ratio [HR], 1.46; 95% confidence interval [CI], 0.84-2.54), as compared with non-drinkers, but the outcome was not statistically significant. They showed much increased risks of mortality from esophageal cancer (HR, 6.42; 95% CI, 1.41-29.3).
Conclusions: The results of this study suggest that frequent binge drinking have a harmful effect on esophageal cancer. These findings need to be confirmed in further studies.

OT12-3

Risk Factors for Knee Osteoarthritis in Adults Aged More than 50 Years

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Introduction: A variety of risk factors contribute to the development of knee osteoarthritis (OA).
Objective: To determine some potentially modifiable risk factors for knee OA in adults aged >50 years.
Methodology: Age sex matched case control study was carried out among 199 cases and 199 controls. This was achieved in three phases. In the first phase Knee Osteoarthritis Diagnosis Instrument (KODI) - Sinhala was developed and validated from the American College Rheumatism clinical criteria. Then a descriptive cross sectional study of 1750 adults >50 years was carried out in Colombo district by two stage stratified cluster sampling technique with probability proportionate to the size of the population. Finally age sex matched cases and controls were selected from them by using KODI-Sinhala. Interviewer administered questionnaire was used to assess some potentially modifiable risk
Results: After making adjustments for confounding effects using conditional logistic regression, multivariate analysis confirmed following risk factor. Monthly income of >Rs2001 (OR=2.4,95%CI:1.2–4.8,p=0.013), highly active jobs (OR=5.8,95%CI:2.1-15.9,p<0.00), squatting during the job (OR=2.4,95%CI:1.1-5,p=0.022) or domestic activities (OR=2,95%CI:1.1-4,p=0.022), weight lifting (OR=2.8,95%CI:1.4-5.8,p=0.004) exposure to knee accident (OR=4.3,95 %CI:1.5-12.5,p=0.007), BMI ≥ 25 (OR=3,95%CI:1.6-5.8,p<0.001).
Conclusion: The key potentially modifiable factors for the development of knee OA include injury, obesity and occupational and domestic overuse.

OT12-4

Perception About Diabetic Eye Diseases in A Bangladeshi Rural Community: A Qualitative Study

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Purpose: In a phase of developing BCC strategy for the newly launched diabetic eye care project of Diabetic Association of Bangladesh (DAB) and ORBIS International; we found no available information about the knowledge, perception, interest, attribute and information channel of the local population. Hence the study was designed to explore the perception on diabetes and diabetes related eye diseases among the people in Thakurgaon, a northern district in Bangladesh.
Methodology: We conducted 20 focus group discussion (FGDs) and 20 in-depth interviews (IDIs) with different stakeholders among 220 participants aged above 40 years in 2 unions of each of the 5 sub-districts of Thakurgaon.
Result and discussion: Different extent of response came up in the study from no knowledge to some knowledge with interestingly huge misinformation. Many of the people even not heard of diabetes and had different wrong perception about diabetic complications, eye problems and treatment requirement. Not a single respondent heard about the disease, Diabetic Retinopathy (DR). A significant number of participants couldn't explain the relation between diabetes and diabetic eye diseases. Regarding accessibility to information, 25% respondent told that they get information from announcement by mike, 17% from house hold visit, and another 17% from different types of community group meetings.
Conclusion: Findings in this study identified a range of opinions about diabetes, diabetes related eye disease and information channels. These perceptions helped later in designing BCC Intervention strategy for the community including nearby hard-to-reach area.

OT12-5

Blood Pressure and Stroke Mortality By Binge Drinking among Korean Men: A Kangwha Cohort Study

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Background: Binge drinking and increased levels of blood pressure substantially increase the risk of stroke. The study objective was to examine the association between blood pressure and risks of mortality due to stroke considering binge drinking.

Methods: This study followed a cohort of 2,624 residents in Kangwha County, aged 55 or older in March 1985, for their cause-specific mortality for 20.8 years up to December 31, 2005. We calculated hazard ratio of mortality by experience of hypertension or systolic blood pressure (SBP) levels using the Cox proportional hazard model after adjustment for age, smoking, body mass index, education level, and alcohol drinking. We also performed stratified analyses by experience or frequency of binge drinking. Binge drinking was defined as having 6 or more drinks on one occasion.
Results: Those with SBP>165 mmHg had an increased risk of mortality from total atherosclerotic cardiovascular disease (HR, 3.25; 95% CI, 2.35-4.49) and total stroke (HR, 3.54; 95% CI, 2.41-5.20) compared to those with SBP<130 mmHg. In subgroups by binge drinking, the relations of stroke were stronger in binge drinkers (HR, 5.77; 95% CI, 2.35-14.2) than non-binge drinkers (HR, 3.05; 95% CI, 1.98-4.70). In binge drinkers who drink daily, the association of stroke with systolic blood pressure was much stronger (HR, 11.4; 95% CI, 2.60-50.4).
Conclusions: The results of this study suggest that high systolic blood pressure have a harmful effect on total stroke in Korean and the relation is stronger in frequent binge drinkers. These findings need to be confirmed in further studies.

OT12-6

Self-Efficacy, Self-Care Practice and Glycemic Control among Type 2 Diabetes Patients in Yangon, Myanmar

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The purpose of the study was to explore the prevalence of glycemic control and factors influencing glycemic control among type 2 diabetes mellitus in Yangon, Myanmar. By accidental sampling, data were collected from 266 diabetes patients seeking health care at diabetes clinics in Yangon, Myanmar. HbA1c was used as an index for glycemic control and the goal of good glycemic control was <7%. The results of the study indicated that the median HbA1c value was 7.8%. Approximately, 27.1% of the patients achieved the goal level of HbA1c (<7%) whilst 30.8% of the patients had good overall self-care practice and 62.0% had high self-efficacy. The univariate analysis showed that age, medication taken and presence of ulcerated foot were significantly associated with glycemic control as well as there were strongly associated with self-care practice, self-efficacy and glycemic control. Multiple logistic regression analysis revealed five variables were associated with glycemic control: age (adjusted OR=2.56, 95% CI= 1.24-5.26), medication taken (OR=2.23, 95%CI=1.13-4.38), Body mass index (OR=2.01, 95% CI=1.02-3.95), self-care for physical exercise (OR=1.98, 95% CI=1.02-3.87) and self-efficacy (OR=5.29, 95%CI=2.20-12.75). Informative health education program for diabetes patients especially for diet and physical exercise should implement for the patients to have better glycemic control.

OT12-7

Derivation of Anthropometric Cut-Off Levels for Defining Cardiovascular Disease Risk in Sri Lankan Adults

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Background and Objectives: Obesity is strongly associated with cardiovascular disease(CVD) risk. However, ethnicity-specific anthropometric cut-offs are recommended for obesity assessment. Objective of this study was to define population specific anthropometric cut-off values to define CVD risk among Sri Lankan adults.
Methods: A random sample of 4532(males-1793, females-2739) nationally representative non-institutionalized adults aged ≥18years were included in analyses. Body mass index(BMI), waist circumference(WC), waist-to-hip ratio(WHR), blood pressure, fasting venous blood samples were collected to measure glucose, high density lipoprotein cholesterol(HDLC) and triacylglycerols. Oral glucose tolerance test(OGTT) was also preformed. Cut-off values were defined using Receiver Operating Characteristic curve analysis. High CVD risk was confirmed by logistic regression analysis.
Results: The age-adjusted BMI, WC and WHR were significantly associated with CVD risk factors($p < 0.001$). Cut-off values for BMI, WC and WHR for males were 20.7kg/m2, 76.5cm and 0.89, and for females were 22.0 kg/m2, 76.3cm and 0.85 respectively. The common cut-off value for BMI, WC and WHR were 21.5 kg/m2, 76.3cm and 0.87 respectively for Sri Lankan adults. Optimum sensitivity and specificity obtained from the receiver operator characteristic curve corresponded to these cut-off values. The current Asian and Caucasian anthropometric cut-off level showed lower sensitivity and lower correct classification as compared to newly derived cut-offs.
Conclusion: For public health action, we propose the following anthropometric cut-offs points to determine high CVD risk for Sri Lankan Adults: BMI≤ 21.5Kg/m2, WC ≤ 76 cm and, WHR ≤0.85(women) and 0.90(men).

Oral Track 13- Health Equity

OT13-1

Is There Income-Related Differential Access to Medical Institutions Under NHI

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Recognizing the importance of health care in enhancing human capital quality, governments around the world have been dedicated to improving the efficiency and equity aspects of the health systems and better population health. Hence, assuring an equitable access to care has become an undeniable policy objective of NHI. This study is set forth to examine whether there is income-related differential access to different levels of medical institutions under NHI. In addition to the total number of visits, total medical expenditures and drug expenditures which represent service intensity were also examined. Index of horizontal inequity was employed to assess the equity distribution of health care use and the validity of the estimation results was improved with research variables profoundly constructed from exploiting 2001 National Health Interview Survey and a well-linked 2000-2003 NHI claim data. The study found that in terms of visit number and probability of use, the wealthy seem to have better access to more sophisticated medical centers and regional hospitals, and on the contrary, a pro-poor/proportional distribution is observed at district hospitals and clinics, after adjusting differences in health care needs. However, the poor are the big users of medical resources (in terms of total medical and drug expenditures) at medical centers and regional hospitals, but no statistically significant differences observed at the district hospital. The results seem to suggest that the wealthy people have better access to more sophisticated medical institutions, but the poor who showed up at medical centers tend to be sicker and incur higher expenditures.

OT13-2

A Four-Year Follow-Up Survey on the Influences to the Health Output Equity from the New Rural Cooperative Medical System

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Objective: To study the dynamic changes of influences to the health output equity from the new -type rural cooperative medical system(CMS) through comparing the base-line investigation with the three follow-up investigations. Offer the scientific basis for improving the implementation plan of the new-type rural CMS.
Methods: The multi-phase stratified random sampling has been adopted to select 3 sample counties, 9 townships, 27 administrative villages, about 1890 families as the study objects and carry out household investigation for four consecutive years. Put the four surveys' results for a longitudinal comparative study. Use the concentration index (CI)、slope index of inequity (SII) to evaluate the health output equity.
Results: Two weeks prevalence rate, half years chronic diseases prevalence rate, two weeks working (studying) suspended rate of four surveys all show descending tendency. The CI absolute values of two weeks prevalence rate, half years chronic diseases prevalence rate are less than 0.2 and of two weeks working (studying) suspended rate and days, two weeks bed rate and days are less than 0.3. The SII absolute values of two weeks prevalence rate、two weeks working (studying) suspended rate and days all show descending tendency, but the CI and SII absolute values of half years chronic diseases prevalence rate show ascendant tendency.
Conclusion: The peasants' health output equity is good. The implementation of the new-type rural CMS has some effect on peasants' health output equity, mainly in positive effects.

OT13-3

Catastrophic Payments and Coping Associated with Household Spending Due to Acute Coronary Syndrome in Kerala, India

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Background: India had the highest number of deaths attributed to coronary artery disease (CAD) in 2002. Out-of-pocket expenditure data related to Acute Coronary Syndrome (ACS), the major cause of deaths in CAD, are not available. We estimated out-of-pocket expenditure, catastrophic health spending (CHS) and coping strategies for the treatment of ACS.
Methods: Using stratified random sampling 210 ACS patients (mean age 56 yrs, 83% men) were selected from six hospitals in Trivandrum district. Information on demographics, ACS-related and household consumption expenditure and financing options was collected using a pre-tested structured interview schedule. CHS was estimated using the 40% threshold methodology. Multiple linear and logistic regression analyses were conducted to identify the correlates of proportionate out-of-pocket expenditure and CHS respectively.
Findings: Patients from low socioeconomic status (SES), treated with any intervention procedures and without any health security coverage had significantly higher proportionate out-of-pocket expenditure compared to their counterparts ($p< 0.001$). Compared to their counterparts, patients who belonged to low SES were 15 times [(odds ratio (OR) 14.51, 95% CI: 1.69-124.41)], whose jobs were adversely affected were seven times (OR: 7.21, CI: 1.54-33.80), who had no health security were six times (OR: 6.00, CI: 2.02-17.81) and who underwent any intervention were three times (OR: 3.24, CI: 1.03-10.16) more likely to have CHS. Unsecured loans, assistance/gifts, savings and mortgage of assets

were major coping strategies. Interpretation: A viable financing mechanism for treating ACS is warranted to prevent CHS particularly among low SES patients, those without any health security and those requiring intervention procedures.

OT13-4

Distribution of Household Out-of-pocket Payment for Health Care in Malaysia

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Background: Due to increasing consumer demand and enabling Government policies encouraging growth of private enterprise in Malaysia, there has been rapid development of the private health care sector in recent years. Unlike the heavily subsidised public health care services, private health care is mainly financed through household out-of-pocket (OOP) payments which in 2004 constituted a substantial 37.6% of total health expenditures in the country. OOP payment, with its reliance on savings and borrowings, is of policy concern as OOP may exert undue financial burden on poorer households. The aim of this study is to examine whether OOP payment for health care is equitably distributed across households of different income levels in the country.
Methodology: We analysed data from the 2004/05 Household Expenditure Survey conducted by the Department of Statistics, Malaysia. This is a nationally representative survey covering 14,084 households. We used 2 summary measures, namely the Concentration and Kakwani Indices, to quantify and compare income-related inequity in the household distribution of OOP payments for health care.
Findings: Overall richer households shouldered disproportionately more OOP payments than poorer households. The OOP payments, as a proportion of income, increased as household income increases, indicating that OOP payment for health care in Malaysia is progressive.
Conclusions: The finding of progressive OOP payment combined with existing evidence of higher utilisation of public health care facilities by the poor seem to indicate that the richer households opted for the more expensive private health care.

OT13-5

Cost and Equity Implications of Public Financing for Health Services at District Hospitals in Nepal

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As an important part of the public health system in Nepal, district hospitals (DHs) play a key role in providing outpatient, inpatient, and emergency services, and serve as the referral point for health posts and primary health care centers. A free care policy targeted to provide free services to the poorest and the disadvantaged was implemented at the time of the study at the DHs. The general objective of this study is to examine how different household wealth classes use DH services and what proportion of the cost of their use is financed by their user fees and public subsidies. That information is then used to assess the budget and equity impacts of alternative operational policies and implementation plans of free care at the DHs. Main Findings of the study include the following: 1. The targeted free health care for the poor policy and user fee schedule implemented at the DHs at the time of the study has produced a modest pro-poor distribution of public subsidies and favorable equity measurements. 2. The extended target free care policy announced in January 2009 is likely to improve the health equity substantially at a reasonable cost. 3. In contrast, a universal free policy that would abolish all user fees and provide essential drugs free for everybody does not fare well. Such a policy would cost twice as much as the current policy, affect provider morale by eliminating incentives, and reduce the health equity by subsidizing the non-poor for using public health services.

OT13-6

Study of the Utilization of Jamkesmas Program (Social Poor Protection Program) in Cirebon Municipality and Ciamis District, West Java Province, in 2008

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The implementation of Jaminan Kesehatan Masyarakat (JAMKESMAS) or Public Health Insurance program is the change of policy of central government, specifically Departemen Kesehatan (MoH) or Ministry of Health, in adjusting the administration of PT. ASKES as the administrator to the central and local governments with tightened monitoring mechanism. JAMKESMAS is a social support program providing health care services for poor and disadvantaged people. Nationally implemented, this cross-subsidy program aims to actualize thorough health care services for the poor. The objective of JAMKESMAS is to improve the access and quality of health care services for the whole poor and disadvantaged people in order to achieve the optimum level of public health both effectively and efficiently (MoH, 2008). This study used Rapid Evaluation Method (REM), In-depth interviews were done to some informants from Health Office, hospital staff, Primary Health Care (PHC) staff, privat midwives, independent verifiers (only in Cirebon) and JAMKESMAS members. The staff members of Health Office , hospitals and PUSKESMAS interviewed are those assigned for JAMKESMAS program, while the private midwives interviewed are those provide services for JAMKESMAS members. The information that the study resulted in may be interpreted as follows: the inpreparedness of the apparatus of District/Municipality

Government in adopting the mechanism of JAMKESMAS's new procedure, the unclear position of verifiers, the equivocal determination of the number and criteria of keluarga miskin (GAKIN) or poor family, as well as the inadequacy of information dissemination to give the same understanding in implementing JAMKESMAS based on the applied guidelines.

OT13-7

Preparedness Analysis of Rural Health Center in Desa Siaga Development in Mentawai Archipelago Regency, the Province of West Sumatera Year 2008

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There were 14 units of rural health center in the district of Mentawai archipelago that planned to be built in 2007. Nevertheless, the actualization is unsuccessful. In year 2008, 12 units more health center were planned to be built, following the determination of Desa Siaga (Alert Village) development policy. Therefore in the beginning the readiness of the community at Mentawai is required to be acknowledged.
The research was conducted to study the readiness of rural health center in the development of Desa Siaga. Qualitative research method was used, by in-depth interview with the person in charge at the health and family planning program, staffs of rural health center, and also by document comprehension as a triangulation form.
There were 'ready', 'lack of readiness', and 'not ready at all' variation of the village health centers' readiness at Mentawai. However, in overall the five variables which are physical infrastructure, logistic and equipment, budget, planning and monitoring has been matured, although have not entirely 100% fit the standard of Health Department. The construction model of the health center was specially designed to be well suited with the isolated, retarded, and archipelago area.
The study showed the rural health center model which developed by Health Department is not suitable to be implemented at Mentawai Archipelago and need some modification. The suggestion to be given to the Mentawai Archipelago Health Department is to expedite the actualization of the physical infrastructure and the equipment of the health center.

Oral Track 14- Social Determinants of Health

OT14-1

Short Sleep and Long Working Hours Predict Obesity in Middle Aged Australian Employees

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Short sleep durations and long working hours are two lifestyle factors that may contribute to weight gain and obesity in middle aged adults. We examined the potential associations between sleep duration, work hours and obesity (measured by body mass index) in 17 210 Australian full time employees, aged 45 to 65 years. The data for this study were drawn from the 45 and Up Study, a survey of adults aged 45 years and over conducted in New South Wales, Australia. Multinomial logistic regression was used to analyse these data, with sleep duration and work hours entered into a model predicting obesity, adjusting for socio-demographic factors, health behaviours, and chronic health conditions. The results demonstrate that short sleep duration and longer working hours were independently associated with obesity. For example, compared to 7 hours sleep, those reporting less than 6 hours (Odds Ratio [OR] = 1.75, 95% confidence interval [1.32, 2.31]) and 6 hours (OR = 1.36 [1.20, 1.54]) sleep a night were more likely to be obese. Compared to people working 35 – 39 hours a week, those working more than 50 hours a week were also more likely to be obese (OR = 1.48 [1.31, 1.67]). These results have important public health implications for middle aged Australian workers, as short sleep and longer work hours could be targeted to prevent obesity.

OT14-2

Social Patterning of Obesity: Sleep Problem as A Mediating Factor?

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Introduction: The association between sleep problem and obesity had drawn much public attention recently. Short sleep duration was a novel risk factor leading to obesity. Poor sleep quality was also considered to be obeseogenic. However, many biosocial factors such as age, physical exercise, socioeconomic status, and shift work were also associated with both sleep quality and obesity in previous studies. Herein, we examine the hypothesis whether sleep quality had mediating effect between these biosocial factors and obesity.
Method: Using data drawn from Taiwan's 2001 Social Development Survey on Health and Safety, a sample of 25,985 Taiwanese adults aged 20 to 64 were analyzed. We applied structural equation models (SEM) to estimate the causal relationships between socioeconomic status (personal income and education), sleep pattern (duration and quality), shift work pattern and a respondent's BMI value, while controlling physical activity and age.
Results: Both in men and women, poor sleep quality and low education level had direct effect on a higher BMI value. Poor sleep quality mediated the effect of higher personal income in men and shift work pattern in both sexes on a higher BMI value. Short sleep duration is shown to be an insignificant variable for an increased BMI value.

Conclusion: By elucidating the mediating effect of sleep quality on the link between personal socioeconomic status and increased BMI values, improving sleep quality may play an important role in curbing the global trend of obesity.

OT14-3

Gender Differences in Smoking among Adolescents in Malaysia

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The aim of this study was to explore gender differences in smoking among adolescents in Malaysia. A combination of quantitative and qualitative studies was conducted among male and female adolescents aged 14-16 years. The study showed that there are gender differences in the factors that were related to smoking. The factors that seem to influence smoking initiation in boys are friends and siblings smoking, urban locality, living with others, poor family closeness/bonding, moderate religiosity and higher sensation seeking characteristics. While for the girls, the predictors other than friend and sibling smoking were age and higher risk characteristics. For both boys and girls the interaction between school connectedness and parental smoking behavior was statistically insignificant. However, among girls, an association between school connectedness and smoking existed only when they had smoking parents. Low school connectedness constituted a risk factor among girls only in combination with parental smoking status while in boys, low school connectedness without any parental involvement will lead them to initiate smoking. Girls seem to be more influenced by happenings at home while boys are more susceptible to happenings at school. Subsequently, this may cause gender differences in norm internalization. The above gender differences may be explained by the different social worlds in which boys and girls live, and by the different roles of boys and girls in society. Therefore smoking plays an important role in the social lives of adolescent girls and boys alike, but the functions and meanings of smoking differ for both sexes.

OT14-4

Has Social Disparity in Mortality Become Widened in Korea Since the Economic Crisis in the Late 1990S?

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Introduction: South Korea experienced serious economic recession during the late 1990s due to a foreign currency crisis and accepted the neo-liberal market oriented economic policies. It is general that social inequality in health and mortality increases with the advent of neo-liberalism. To date, there have been few attempts to examine whether social disparity in mortality has worsened in Korea since it has adopted economic policies based on the neo-liberalism. Methods: We estimate educational inequalities in life expectancy and age-specific death rates for three different time points: before the economic crisis (1995), in the middle of the economic crisis (2000), and after the economic crisis (2005). Results: Life expectancy at age 40 has gradually increased in all levels of education for both sexes during the study period. However, the gradient by the level of education persisted. Relative disadvantage of women with low education over their counterparts with higher education became slightly wider. Regarding age-specific death rates, the relative disadvantage by the levels of education was the highest in 2005, followed by 2000 and 1995 among working aged men. Discussion: Findings suggest that social disparity in mortality did not become notably worse in both sexes in terms of life expectancy at age 40. However, age-specific mortality rates showed that relative disparity certainly became worse during the study period only among working age adults. Since the neo-liberalism is mainly about the market system and more flexible employment conditions, socially deprived working aged population became the victim of worsening mortality profiles in Korea.

OT14-5

Urbanisation and Non-Communicable Disease Risk in Sri Lanka

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Non communicable diseases (NCD) make a major contribution to the burden of diseases in developing and developed countries with marked differences between urban and rural populations mainly in the developing countries. We aimed to evaluate the patterns and distribution of common NCDs and risk factors using a objective tool (Allender et al). It is important to understand the relationship between urbanisation and NCDs to adopt preventive policies. Urbanisation was quantified using the tool comprising seven components. This scale was administered in all 100 comprising the Sri Lanka Diabetes and Cardiovascular study. The area level score for each cluster was assigned to 4485 participants. Mean urbanicity score was 22.08 (SD= 8.4). Clusters were allocated into 3 groups according to the urbanicity score; low, middle and high. For males higher body mass index (BMI) (ANOVA test F = 38.454, sig< 0.05) lower level of physical activity (F=52.022, sig< 0.05) and raised LDL cholesterol (F=8.808, sig< 0.05) was observed with increased exposure to urbanisation. Similar findings were observed for females with

urbanicity, higher BMI (F=100.6, sig< 0.05), raised LDL cholesterol (F=5.12, sig< 0.05) and lower level of physical activity (f=9.85, sig< 0.05). Quantification of urbanisation using a multi-component scale is feasible in a developing country setting. Several NCD risk factors are associated with increased level of urbanisation identifying possible points of intervention over the development cycle to augment the chronic disease impact of urbanisation.

OT14-6

Health Outcome Expectancies Predict Fruit and Vegetable Consumption Behavior

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Consuming fruits and vegetables impacts health and helps reduce risks of certain cancers and diseases. Despite knowledge of guidelines, most Americans do not consume enough. In Expectancy Theory, an individual's outcome expectancies help predict behavior. This cross-sectional study examined differences between daily servings of fruits and vegetables participants thought they needed for health benefits compared to knowledge of health experts' recommendations, and the relationship of these differences to reported consumption. Participants were 3,169 adults from a random-digit-dial telephone survey. Most participants were female (66.5%), married (60.0%), and had some college education or more (74.7%). Participants included Whites (41.5%), Asians (33.9%), and Hawaiians/Pacific Islanders (14.1%). Both knowledge of recommendations (r=.390, p<.001) and health outcome expectancies (r=.586, p<.001) were positively correlated with consumption behavior, and significant differences existed by categories for outcome expectancies, f(2, 3166)=81.51,p<.001. Tukey posthoc comparisons indicated that those with positive health outcome expectancies (those who thought they needed to eat more servings than recommended by experts) reported greater consumption than those with neutral (needed same as recommended) or negative (needed less than recommended) outcome expectancies (p<.001). In addition, those with neutral outcome expectancies had greater consumption than those with negative outcome expectancies (p<.001). It appears that positive and neutral health outcome expectancies are correlated with greater fruit and vegetable consumption. Future research should address health outcome expectancies in addition to knowledge in order to increase consumption.

OT14-7

Multi-Objective Transferal Medical Service Spatial Location Model

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Transferal medical service is a new policy for Taiwan prime care service in recent years. Although it just started, more and more clinics joint in indicated the prospective of future success. Due to the complexity and lack of similar math model to handle the assignment of grouping the transferal medical service this study develops a Multi-objective Transferal medical service Spatial Location model, MTSL, to deal with the spatial aspect of location decision which not yet been dealt with. MTSL uses the spatial data from Taichung City and County to provide a spatial and capacity equity toward the residents within. The variables used are spatial address point, prime care location points, hospital location point and medical center location point as the basic data. The model itself is based on multi-objective operation research and the process required Voronoi and P-Center algorithm. The result is the locations and boundaries for each transferal medical service group which contain at least 3 types of clinic out of 5 different types which include Family medicine, Ophthalmology, Dentistry, Chinese medicine and Rehabilitation. The capacity of each assigned transferal medical service group is given by using the average of population over hospital within the study area. The final map indicated 71 transferal medical service groups with average about 36,350 residents accessing nearest clinic with the average of 492.74 meters, the standard deviation for capacity and distance are 6,266, 522 with respect which is a fairly good result.

Oral Track 15- Social Determinants of Health

OT15-1

Cancer Patients' Satisfaction with Communication, Information Given by Nurses at Teaching Hospitals of Tehran City, Islamic Republic of Iran

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Effective patient–professional communication can be of crucial importance to long-term psycho- social outcomes in patients with cancer. A cross sectional study was carried out to examine patients' satisfaction with regard to various aspects of communication and information given by nurses. A proportional stratified sampling method was done and data was collected via face-to-face interview based on a validated Patient Satisfaction Questionnaire (PSQ) during a 3 month period. A total of 384 patients aged 14 years old and above were selected. The majority of respondents were males (52.4%) and married (66.4%), working (52.6%) and age group 45-54 year (26.4%) with secondary education level (44.8%),

and (54.0%) of them admitted at teaching hospitals of government A University of Medical Science. The findings revealed that a vast majority of these respondents (81.5%) was satisfied with communication and information given by nurses, while the others (18.5%) were not. There was significant relationship between patients satisfaction and age group ($p<0.05$). Also, the age group 15-44 years old and married patients were the best predictors for level of cancer patients' satisfaction with communication, information given by nurses. Key findings are that there are a number of issues with regard to information and communication which can be clearly improved within teaching hospitals of Tehran city. The paper concludes that patient– professional communication should be tailored to meet individual need.

OT15-2

Are Children of Foreign-Born Mother Not as Healthy as Those of Native-Born Mother?

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The number of cross-border marriages and the children born in those families in Taiwan has significantly increased from the 1990s. Media reporting suggested that children of foreign-born mother have worse health status than those of Taiwan-born mother. This study is to examine whether there are health disparities among children of China-born, Southeast Asia-born and Taiwan-born mother. Data for the analysis came from two waves of Taiwan Birth Cohort Pilot Study of 1617 nationally representative new born babies, conducted from April to June in 2004 and May to July in 2005, respectively, at the age of 6 and 18 months old. The babies were grouped into those of China-born, Southeast Asia-born, and Taiwan-born mother. Health variables examined include adverse birth outcome (prevalence of preterm birth, low birthweight and birth defect), early child development (attainment of developmental milestones at 6 and 18 months of age), and health conditions (child injury and fever, infectious or gastrointestinal diseases). No significant differences were found among three groups for prevalence in preterm birth, low birthweight and birth defect. Children of Southeast Asia-born mother experienced significantly poor motor developmental attainment (OR=1.69, 1.10-2.61). However once controlling for family socioeconomic characteristics, the risk of adverse motor development for children of Southeast Asia-born mother disappeared (OR=1.56, 0.99-2.46). Children of Southeast Asia-born mother had lower risk of fever, infectious or gastrointestinal diseases (OR=0.44, 0.27-0.73) than those of Taiwan-born mother regardless of their disadvantaged family socioeconomic position. Children of Southeast Asia-born and China-born mothers did not experience worse health status in Taiwan.

OT15-3

Health Behaviors, Personal Characteristics and Healthy Aging: Cross-Sectional Evidence from the Health-Related Quality of Life Study among the Elders in Zhejiang Province of China

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In China, elderly population is expanding at a rate of 5.96 million per year which results in an increase in the burden of chronic disease leading to low quality of life. So, we conducted a cross-sectional study based on a multistage cluster sample of 4995 elderly people, 2441 in rural area and 2554 in urban area, aged 60 years and over in Zhejiang Province of China. A self-developed structured questionnaire and the SF-36 were used as an instrument of assessment.
Comparing to the elders living in rural area, the elders in the turban had much better self-related quality of life, with high proportions of scores above 70 in 8 dimensions of the SF-36 (PF 72.0%, RP 76.3%, BP 89.1%, GH 23.3%, VT 79.6%, SF 86.7%, RE 81.3%, MH 79.3%). Of 4157 subjects responding to the living arrangement, 17.54% were living alone and had significantly low scores in sub-scales of the SF-36 except BP and SF ($p<.05$).
The results indicated that not only in urban area, but also in rural area, high age, female, low level of yearly income and no drinking history were correlated with low quality of life. But, the factors of physical exercise and yearly income, respectively, played significantly important role in improving the quality of life of older adults in urban and rural areas.
Generally, it is important to take pertinent measures to promote healthy aging in urban and rural areas, respectively, for the distinctions of t

OT15-4

Assessing the Use of the Family Affluence Scale as Socioeconomic Indicators for Researching Health Inequalities in Adolescents

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Introduction: Inequality in socioeconomic status has been shown to be predictors of key health indictors in young children and adults. However, the association between socioeconomic inequality and health among adolescents was less clear. The purposes of this study were to examine the completion rate, internal reliability,

and external validity of the Family Affluence Scale (FAS), and to examine its ability to detect health inequality among adolescents.
Methods: The data came from a 2009 school-based survey of 3368 students (1741boys, 1627girls), aged 11 to 18 years old in Kinmen County of Taiwan. Indicators of the familial social position were parental occupation and education. Indicators of material affluence were number of cars, vacation travels, own room and computers in the family (FAS items).
Results: Father's occupation was reported by 85.6% of the schoolchildren, 54.0% reported on mother's occupation, and 88.8% on parents' education, while over 98% reported on the FAS items. The Cronbach's alpha of the FAS scale was modest (0.36). The associations between the FAS scores and parental occupation and education were low but statistically significant. Consistent gradients were found for positive health and some health behaviors in association with FAS.
Conclusions: The Taiwan version of the FAS showed good completion rate, adequate internal reliability and moderate external validity. The clear associations between the FAS and health indicators confirm previous studies and suggest that the FAS can be used as an additional measure of socioeconomic status among adolescents.

OT15-5

Assessing the Level of Disclosure among Women Experiencing Breast Cancer and Their Husbands

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Background and objectives: The level of disclosure could be a good indicator to marital well-being. This paper assesses couples' level of disclosure and factors predictive of women's level of disclosure at post-chemotherapy for breast cancer.
Method: One hundred and fifty seven women with breast cancer and their husbands answered the Level of Disclosure Scale. Data was collected at three time points: 7, 14 and 23 weeks following diagnosis. High score of the scale indicate high level of disclosure. Medical and socio-demographic data were also gathered.
Results: Mean age of the women and their husbands were 48.29 (± 8.85) and 52.21 (±9.01) years old respectively with mean duration of marriage 22.61 (±9.9) years. Most of the women were diagnosed with stage two of breast cancer. Women's level of disclosure significantly increased throughout the treatment phases (prior=15.99±4.46; during=17.77±5.34; post-chemotherapy=17.92±5.27). Regression analysis indicated that women's disclosure prior to chemotherapy explained 94% of the variance of women's disclosure post-chemotherapy. However, women's disclosure during chemotherapy, husbands' disclosure at all treatment phases, couples' ages, duration of marriage and duration of breast cancer did not predict women's disclosure. Types of surgery and breast cancer stages were not an important factors affecting couples' level of disclosure.
Conclusion: Counselors should assess client's level of disclosure at different phases of breast cancer treatment in order to understand the marital and global public health issues.

OT15-6

Health-Related Quality of Life (HRQOL) in Chinese Women with Urinary Incontinence: A Pilot Study

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Women with Urinary incontinence (UI) are more likely to report a poorer quality of life(QOL). The lack of data on the QOL of female UI in Chinese mainland led us to conduct this study. Objective: To evaluate the HRQOL in Chinese women with UI; To examine the impact of UI on women's HRQOL; To determine the association between risk factors and HRQOL. Method: 95 women(age>18) with UI who sought medical attention at PUMC Hospital were recruited. A questionnaire consisting of SF-36, ICIQ(International Consultation on Incontinence Questionnaire), SSRS(social support scale), demographic characteristics and medical information was used to interview. The SF-36 score of a previous large survey in general Chinese women was as the normalized score for comparison; The ICIQ and SSRS were used to assess the symptoms of UI and social support condition respectively.
Results: 1) Compared with the normalized score, women with UI had lower mean domain scores(P0.05); 2) The vast majority of the women considered that their urinary problems affected their physical activities in daily life, and almost half reported negative consequences for sex life and sentiment; 3) HRQOL was significantly ($p < 0.05$) associated with limit in daily activities, sexual quality, negative sentiment, education level, severity of symptoms, duration of UI symptoms, age, social support, income.
Conclusion: Urinary incontinence significantly impairs the HRQOL in women, suggesting the need for more social and medical study in this area.

OT15-7

Quality of Life of Migrant Labor in Samut Sakhon Province, Thailand

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This cross sectional-study was conducted to assess quality of life of migrant labors in Samut Sakhon province which attracts migrant labor in seafood

processing industry. 279 migrant labors who were over 18 years old, and working more than 6 months were interviewed by health volunteers using the structured-questionnaire in February 2008.The data were analyzed by Chi-square test and multiple logistic regression analysis. Almost all of the migrant labors (91.5%) were Myanmar nationality , about half of them (53.8%) were educated at a primary level. More than half of them (61.7%) were manufacturing workers, and the average monthly income was 5,168.7 baht. For quality of life, 49.8 % and 50.2% of the migrant labors had a high satisfactory level for physical and mental components respectively. It was found that age, sex, educational achievement, occupation, monthly income, documentation and history of illness were significant associated with physical component of quality of life ($p < 0.01$).For mental components of Quality of Life, sex, educational achievement, occupation ,monthly income, documentation and history of illness were significant variables($p<0.01$).The three significant predictors of physical component of Quality of Life by multiple logistic regression analysis were living conditions(adjusted OR=4.09, 95%CI=1.97-8.51, $p<0.001$),working conditions(adjusted OR=4.59, 95%CI=1.99-10.59, $p<0.001$) and educational achievement(adjusted OR=2.86, 95%CI=1.07-7.60) The three significant predictors of mental components of Quality of life were history of illness(adjusted OR=3.13,95%CI:1020-8.19,p=0.020), living conditions(adjusted OR=2.30,95%CI:1.41-4.62,p=0.020), and working conditions (adjusted OR=5.93,95%CI=2.28-15.42,$p<0.001$).The provincial health officers should be more focused on occupational health program of migrant labor to protect them from job-related health problem and also living conditions need to be improved.

OT15-8

Gender Differences of Health Behavior in Kazakhstan

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Objective: To study of health behaviour gender differences of Kazakhstan population.
Context: Gender factor have a significant influence on the health of population in Kazakhstan that leads to gender mortality gap and gender differences of morbidity rates. In connection with it we have conducted investigations in the sphere of gender peculiarities of health behavior among adolescents and adults.
Analysis of morbidity rate showed that boys' morbidity higher than girls' among children aged 0-14 y. ($p<0,001$), but in the group of adolescents aged 15-17 y. girls' morbidity higher than boys' ($p<0,001$). It is established that boys more often try to use harmful substances, have earlier sexual intercourse debut, spend more time playing computer games, but they have higher level of physical activity and more positive self-esteem in comparison with girls. Girls characterized by higher rates of subjective psychosomatic complaints, low level of life satisfaction and self-rated health. Multifactor analysis established that life circumstances factors such as family, school, peers have a gender specific influence on the adolescents' health behaviour.
Gender differences of psycho-emotional factors and gender specific features of life style and health behavior were revealed among adult population.
Conclusion: Thus, revealed gender differences of health behavior and life circumstances factors should be taken into account to provide different needs of population gender groups and in developing health policy and public health programs in Kazakhstan sensitive to gender issues.

Oral Track 16- Community Health

OT16-1

Building Environmental Health Capacity in the State of Qatar: A Canadian Experience

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Developing and building a professional, sustainable environmental health workforce is one key feature of the College of the North Atlantic-Qatar's (CNA-Q) mandate to build human resource capacity in the State of Qatar. CNA-Q provides a Canadian based, student centered post secondary training institution in the State of Qatar. Integrating Canadian environmental health officer competencies of the Canadian Institute of Public Health Inspectors certification body (CIPHI) into a cross cultural, English as a second language environment are both unique, challenging opportunities to environmental health capacity building. The successful features of the environmental health program at CNA-Q include the following process indicators: 1. The Environmental Health curricula foundation based on 488 instructional objectives identified by CIPHI over 16 major topic areas. 2. Focus group meetings attended to by the Supreme Council of Health and private industry. 3. A Canadian standard for Environmental Health course content, outcome objectives, performance evaluation , and academic council approvals. 4. Language training pre-requisite standards for entrance to the Environmental Health Program. 5. Full sponsorship opportunities for Qatari Nationals entering the Environmental Health program. 6. Work-term experiential practicum's offered to all students. 7. Environmental health course reviews every two years with stakeholder input. 8. Professional development opportunities to existing environmental health officers with the CNA-Q "Train the Trainer" program. The goals of the presentation are to identify the successes, the unique cross cultural opportunities, and

the unique social determinants of health underlying the building of environmental health capacity in the State of Qatar.

OT16-2

Establishment of Public Health Campus under Tribhuvan University Institute of Medicine

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Background In 1978, Institute of Medicine (IoM) started an innovative medical curriculum that was community oriented, problem based, self directed and integrated teaching/learning approach. In those days, the government was the major consumer of the health workers. Today, there are several medical colleges in the country producing a large number of health professionals. The natures of the issues and problems, and policies in health sector have changed dramatically over the time. At IoM, the Department of Community Medicine and Family Health is engaged in teaching Community Medicine for MBBS, and runs a full-fledged Public Health Programs (MPH and BPH). In future, it aims to expand the master programmes in different specialty and start PhD Program. For lack of fund, public health researches have been minimal. The Department has a strong potential to give inputs to the health system and policy. There has been a global trend to develop linkages with the academic institutions both at the National and International levels. Rationale It has been felt that the Department may not be able to accomplish all of above tasks within the frame of a department due to its limited scope and the regulatory provisions of IoM, and hence a separate Campus of Public Health is proposed. Concept The Public Health Campus will be one of the Constituent Campuses of Tribhuvan University and will be autonomous for developing its own programmes for: 1. Resource generation and utilization 2. Programme development 3. Programme implementation, and 4. Developing linkages with national and international institutio

OT16-3

Assessing the Prevalence and Associated Chronic Diseases of Metabolic Syndrome in Older Taiwanese

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Rationale & Objectives: The prevalence of metabolic syndrome (MtS) is rising in many countries but the definition is not universally defined. We compared the prevalence of MtS in older Taiwanese according to ATPIII (Adult Treatment Panel-III), IDF (International Diabetes Federation), and Taiwan-2006 definitions. Materials & Methods: We analyzed data of the Social Environment and Biomarker Aging Study to determine the prevalence and the association of MtS with the major chronic diseases according to the three definitions. Results & Findings: The prevalence was 18.2, 28.2 and 32.8% based on ATPIII, IDF and Taiwan-2006 definitions, respectively. MtS was associated with personal history of hypertension, cardiovascular disease (CVD) and diabetes mellitus (DM) per ATP-III; hypertension and DM per IDF; and DM, hypertension per Taiwan-2006. The prevalence of MtS decreases with age in men but increases with age in women. Conclusion: The prevalence and associated diseases of individuals identified MtS vary considerably according to definitions. Adopting a uniform definition with population-specific cut-points may help resolve the discrepancies.

OT16-4

Factor Affecting the Success in Master of Public Health Program of Distance Education System, Sukhothai Thammathirat Open University

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The School of Health Sciences, Sukhothai Thammathirat Open University (STOU) was opened Master of Public Health Program (M.P.H.) in the year 2001. This school launched the research to develop the effective of M.P.H. Program by using distance learning system. The purpose of this research were to study the factors affecting the success in the M.P.H. Program, and the problems, obstacles, and suggestion in the M.P.H. Program. This survey research was conducted among 192 graduated students in the M.P.H. Program between academic year 2001 and 2006 by using stratified random sampling. The administrative questionnaires were used for data collection. Percentage, mean, standard deviation and Stepwise Multiple Regression were used to analyze data. The results showed that: student factors: the majority graduated in public health administration. Their self learning method and factors of instructors and distance education system were at a high level, the learning support substance was at a moderate level. The success in the M.P.H. Program was at a good level. The factors were significantly affecting the success in M.P.H. were student factors in the self learning method. The major obstacles were delay of documents sending, the library's office hours were limited for the students and the textbooks were not updated, the computer services were inadequate for students needs. The study suggested that STOU should improve and develop the logistic service system of documents and media, the library services, the computer services and system, , and the accommodations to meet the need of the students.

OT16-5

Multidrug-Resistant Nosocomial Citrobacter Spp. in Om Hospital and Research Center, Kathamandu

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Citrobacter spp. is a commensal flora and an infrequent nosocomial pathogen to cause nuisance in hospital settings. Recently, the isolation of this pathogen in health care setting is rising and the multidrug resistant strains are emerging. This pathogen cause wide array of infections and the mortality rate is unexpectedly high of 30-60%. Extended spectrum cephalosporins have been used to treat this pathogen and due to the emergence of resistant strains to these drugs newer treatment protocols have to be devised. We investigated the epidemiology and antibiotic susceptibility pattern of clinical isolates of Citrobacter spp. isolated in this hospital. Specimens were collected from ten patients and implicated pathogen was isolated. Disk diffusion test was performed on these isolates and probable mechanisms of resistance were deduced. Antibiogram typing was used to resolve the clones of the isolated bacteria. The results showed that Citrobacter spp. was highly prevalent and commonly isolated from the sputum sample of patients diagnosed as chronic obstructive pulmonary disease (COPD). The antibiogram pattern suggested the circulation of three clones of citrobacter spp. They were multidrug resistant and sensitive to only cefoperazone and sulbactam suggesting the production of β-lactamse inhibitors sensitive molecular class A and D extended spectrum β-lactamases (ESBL). In conclusion, treatment protocol should be changed from the use of extended spectrum cephalosporins to combination therapy, β-lactam and β-lactamse inhibitors to treat multidrug resistant Citrobacter spp. and we should aim to prevent the spread of this pathogen among patients to decrease the morbidity and mortality associated with this pathogen.

OT16-6

A Research on the Pilot of Out-Patient Co-Ordination of New Rural Cooperative Medical System in China-Mainland

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Purpose: Analyzing the effects of different out-patients' compensation model, to explore the reasonable and complete compensation plan for out-patient co-ordination and methods of supervision and management.
Methods: Selecting four out-patient co-ordinate counties (Xinjian, Yongxiu, De'an, Chongyi) and four family account counties (Jinxian, Ruichang, Jiujiang, Dayu) to analysis its statistical data in 2008, compare the experimental group with the control group and also compare the data with other 27 counties to evaluate the effects of different models. Holding the forum of different groups (public health administrators, handling personnel and directors of rural township hospitals, rural doctors).Visiting New Rural Cooperative Medical System agencies, township hospitals and village clinics, through on-site inspection found problems in actual operation, to propose the corresponding countermeasure.
Result: Comparing out-patient co-ordination model with family account compensation model: The benefits of peasants has obviously improved（72.75%＞36.94%）. Expenditure of out-patient fund accounted for the proportion of total fund has increased（12.26%＞8.42%）. The average costs of out-patient compensation has reduced (14.88yuan＜22.75yuan）. The supervision has more difficulties. Conclusion: Out-patient co-ordination model is more favorable to make farmers take good use of out-patient health services, but the difficulties of supervision expanded. The sustainable development of out-patient co-ordination is depended on the reasonable compensation plan and the strict and effective supervision measures.

OT16-7

Inclusion of Health Ethics in the Public Health Curriculum and Its Practical Application in Health Research in Nepal

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To date, there are nine public health schools, providing either undergraduate (bachelor) or postgraduate (Master) or both public health programs in Nepal. There is a lack of adequate and proven inclusion of health ethics in public health curriculum, though needs are immense and important for public health graduates. With the principal objective to determine how and in which extent the health ethics and its practical application aspects are included in the public health curriculum, this qualitative study was conducted. Alltogether 12 Focus Group Discussions and 12 Key Informant Interviews were conducted. Public health curriculums were reviewed systematically. Information was verified, coded and thematically analyzed. Efforts were made to triangulate qualitative and curriculum reviewed information. Ethical approval from Nepal health research council was obtained. Universities have given their concern to address issues related to health ethics in their respective public health curriculum at both bachelor and master levels, though the level of inclusion is marginal and varies in different universities. The common terminologies included are: ethical consideration, ethical consent, ethical approval and confidentiality etc. No specific units and teaching hours are allocated for health ethics teaching/learning at both levels. We conclude that, inclusion of health ethics in the current public health curriculum is negligible, inadequate and not covered necessary aspects of health ethics at both levels. Therefore, we recommend revising the current public health curriculum is essential and assure that health ethics get priority as separate unit with considerable allocated teaching hours.

OT16-8

Awareness Regarding Rabies among Mothers Attending Selected Maternal and Child Health (MCH) Clinics in the Municipal Council-Colombo, Sri Lanka

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Introduction: Rabies is an invariably fatal disease posing significant socioeconomic problems in SriLanka and causing high costs on disease prevention and prophylaxis. In the eradication of rabies, public awareness is of paramount importance. It will result in ensuring the community safety.
Objective: To assess the awareness regarding rabies in mothers attending selected maternal &child health(MCH) clinics in the municipality of Colombo with emphasis placed on transmission, seeking medical attention &prevention of the disease.
Method: A descriptive cross-sectional study was conducted among 400systematically randomized participants chosen from six randomly selected MCH clinics within the Colombo Municipality Council. The knowledge was assessed via a pretested and validated interviewer administered questionnaire. Data was analyzed using SPSS. Results :- The mean age of the sample was 29.95years(SD=5.93). 86.5%of them had received a minimum of secondary level education. The mean score for knowledge regarding transmission was 56.74%(SD=14.08%). Knowledge regarding importance of seeking urgent medical attention and knowledge regarding prevention were scored at a mean of 68.02%(SD=12.02%) and 70.28%(SD=16.57%)respectively. The commonest mode of acquiring knowledge was from television(63.3%) while newspapers, radio and handbills accounted for the rest.
Conclusion: This showed that there is a considerable deficiency in knowledge on rabies within the study population. Of particular concern is knowledge regarding transmission of rabies, which is of paramount importance to minimize the incidence.We recommend large scale public awareness programme to overcome it.

Oral Track 17- Community Health

OT17-1

A Community-Based Environment Health Promotion Intervention: A Learning Experience of Medial Undergraduates in Sri Lanka

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Background: Community attachment programme of Colombo University medical curriculum offers opportunity to achieve learning outcomes (LOs) on health promotion. Achievement of these LOs has not been evaluated.
Objective: To describe student perception of achievement of LOs in a community attachment programme through community-based environmental health interventions on household waste management and compare with tutor assessed achievement of LOs.
Methodology: Specific learning objectives were given to students at commencement of attachment during a 1½-year attachment programme. At end of programme a self-administered questionnaire assessed achievement of each LO on a three point scale. Student group reports (n=14), were scored independently by three tutors using agreed upon descriptors as depicting extent of achievement. Average of 3 tutor scores was taken as final score. Results Student response rate was 78% (161/206). LOs perceived as achieved were: participatory needs assessment (51%-large extent; 48%-some extent); evaluating effectiveness (30%-large extent; 60%-some extent); developing communication skills (64%-large extent;34%-some extent); working in teams (50% large extent;43%-some extent); developing favourable attitudes towards leaning from community (39%-large extent;45%-some extent). Correlation between achievement of LOs perceived by students and tutors was substantial (Spearman r=0.535).
Conclusion: Student reporting revealed that most of LOs have been achieved at least to some extent which was corroborated by tutors. Community-based learning can be used for teaching health promotion to medical undergraduates.

OT17-2

A Prediction Model for Type 2 Diabetes among Non-Diabetic Community Subjects in Northern Taiwan

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Aim: This study aimed to develop a predictive model for type 2 diabetes among non-diabetes using demographic and laboratory factors among community subjects.
Methods: We recruited community residents aged 40 years or older who participated in an adult health check-up program in Tao-Yuan during the period of 2004 to 2006. After excluding those with diabetes, cardiovascular diseases, and cancer, 18573 participants were included as the learning sample. An independent sample of 6257 participants of health check-up in a tertiary hospital in 2004 was used as the testing sample. A set of risk scores was developed using coefficients derived from logistic regression analysis, and the Net reclassification improvement (NRI) was adopted to evaluate the predictive ability for an additional predictor.
Results: With 975 subjects whose fasting glucose 126mg/dl being considered as diabetes, the predictive probability for a model including age, gender, body mass index, triglyceride, and systolic blood pressure for

individuals with a risk score of 0 to 35 ranged from 1.4% to 32.0%. The area under the receiver operating curve was 0.713 for the learning sample and 0.744 for the testing sample. With the addition of tobacco, alcohol use and physical activities, the improvement in prediction in terms of NRI value was 0.1523 (P<0.005).
Conclusions: This study demonstrates that a predictive model that is convenient can be used to predict the occurrence of diabetes among non-diabetic adults by means of a set of risk scores that is relatively easy to implement.

OT17-4

A 3-Years Evaluation of the Pay-for-Performance Program for Asthma under the National Health Insurance in Taiwan

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The Bureau of the National Health Insurance (NHI) in Taiwan implemented a “Pay for Performance Program (P4P) for Asthma” in 2001 to improve the care outcome. This study aims to analyze the long-term effects of this program with a hypothesis that the P4P program may reduce patient’s emergency department (ED) visit or hospitalization due to asthma.
We employed a quasi-experimental study design. Using the NHI claim data during 2002 and 2006 we identified 714 asthma patients who were enrolled into the program in 2003 as the experimental group. By using the propensity score method, we then randomly selected 2,142 patients in the control group. We employed negative binominal regression model with difference-in-difference analysis to evaluate the effects of the P4P program.
The difference-in-difference analysis showed that the P4P program increased the physician visits for asthma significantly. After controlling for the baseline patient characteristics in the model, the net differences of the number of physician visit were 2.89, 1.89 and 1.57 respectively between the two groups in 2004-2006. Patients in the P4P group had fewer ED visits than the control group with net differences of 0.02, 0.06 and 0.05 respectively in the three years. The numbers of hospitalization were also lower in the P4P group with net differences of 0.02, 0.02 and 0.03 respectively. However, the differences did not reach a statistical significance level of P<0.05.
In conclusion, the P4P program significantly increased patient’s physician visit for asthma, and the difference in the numbers of physician visits between the two groups lessened gradually in the successive years. However, the P4P program did not significantly decrease the enrollees’ emergency visits or hospital admissions. The current P4P program for asthma has to be modified to reach its ultimate goal.

OT17-5

The Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum: The Trail Blazer and Trend Setter for Public Health Education in India

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The Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), located in the state of Kerala is a trail blazer and trend setter for public health education in India. SCTIMST, an institute of national importance established by an act of parliament in 1980 started the first Master of public health program (MPH) in India in the year 1997, when MPH was not a required qualification for any job positions either at the national or at the state level in India. So far 11 batches of students have graduated and all of them have gained excellent jobs, over 90% within India.
Over 10 organizations in India started MPH program after the successful experience of SCTIMST. Jawaharlal Nehru University, New Delhi, National Institute of Epidemiology, Chennai, Post Graduate Institute for Medical Education and Research, Chandigarh, Tata Institute of Social Sciences, Mumbai are some of them. Another major public health initiative in India is the establishment of the public health foundation of India (PHFI), a public private partnership launched by the Honorable Prime Minister of India, Dr. Manmohan Singh, on March 28, 2006. PHFI is working towards building public health capacity by establishing eight new institutes of public health offering teaching, training and research programs. SCTIMST could provide technical and faculty support to many of the new public health initiatives India.
Major challenges for public health education in India are recruitment and retention of quality faculty and creating career paths for public health graduates at state and national level similar to that exists in a few states such as Tamil Nadu and Gujarat. While all efforts should be made to develop quality faculty it will be worthwhile to experiment usefulness of information technology to share faculty from India and abroad by several public health institutions.

OT17-6

Blood Donation- Does University Students Care?

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WHO reported that blood donation has gone into a steady decline although the demand for transfusion continues to rise. There are various factors that cause the decline in the number of blood donation. This study aims to assess the attitude and practice of blood donation and to show their relationship with knowledge of blood donation. Four hundreds and six students of University of Malaya had been randomly selected to answer the

questionnaire on the knowledge, attitude and practice of blood donation. The questionnaire was modified and translated from a similar study in Quebec, Canada and had been pre-tested on a group of medical students. Results showed that 38% of the 406 respondents had donated blood at least once in their lifetime. Forty one percent blamed medical reason for not donating blood. The level of knowledge in most of the respondent was moderate (61.8%). Respondents with high knowledge scores have the intention to donate blood should there be depletion in blood supply (P=0.013), and majority of them had actually donated blood in the past. Most respondents who donated blood had no intention to donate blood but donated impromptu. In conclusion blood donation campaigns should be expanded to disseminate information on blood donation and provide opportunity for people to donate blood.

Oral Track 18- Mental Health

OT18-1

Association between Religion and Dementia

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Background: Dementia is a growing health issue in the elderly. Several risk factors, e.g., age, gender, and genetic factors have been related to dementia risk. However, studies exploring the relationship between religion and dementia are few.
Methods: A total of 169 patients with Alzheimer's disease (AD), 97 patients with vascular dementia (VaD) and 215 controls were recruited from National Taiwan University Hospital and Cardinal Tien's Hospital from 2007 to 2009. A questionnaire was administered to collect information on religion and social activities.
Results: Christians or Catholics had a lower risk of AD [adjusted odds ratio (AOR)=0.26, 95% confidence interval (CI)= 0.12-0.58], but not VaD, than non-believers after adjusting for age, gender, and education level. Taoists and Buddhists showed a decreased, but not significant, risk of dementia. Interactions between religion (believers vs. non-believers) and social activities (>2 vs. ≤2 times/month) were not significant for AD (p=0.37) and VaD (p=0.93). Both non-believers and believers with less social activities (≤2 times/month) had a higher risk of AD (AOR=3.15, 95%CI=1.62-6.14; AOR=1.93, 95%CI=1.01-3.68, respectively), but not VaD, as compared to believers with more frequent social activities (>2 times/month).
Conclusions: Religion and social activities seemed protective factors for the risk of AD. Future studies exploring the association between religiosity and dementia are warranted, as it may vary across different cultures.

OT18-2

Is there A Difference in Help Seeking Behavior in Stressful Situation among Individuals with Different Psychological Status? A Colombo Experience

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Introduction: The help seeking behavior of an individual at a stressful situation, is important to consider when planning health educational programmes to improve their coping strategies. As there is a wide variation in help seeking pattern among different individuals, recognizing this variation helps to refine the objectives of such interventional programmes.
Methodology: This descriptive cross-sectional study was carried on systematically randomized 240 permanent residents aged 20-39 years at Homagama Pradeshiya Sabha, a sub-urban community in SriLanka. Informed verbal consent was obtained from the participants, before allowing them to answer the pretested and validated General Wellbeing Schedule (GWS) questionnaire. Data was analyzed using SPSS-15.
Results: There were 107 males and 133 females in the sample. 53.3% were married &70.8% were permanently employed.10 %(24/240) of the sample was severely distressed while 48.75%(117/240) were moderately distressed & rest of 41.25%(99/240) were in positive wellbeing according to GWS questionnaire. The majority of severely and moderately distressed individuals had not met a suitable person to ask for help (41.6% and 50.42% respectively). 33.3% & 25.6% of them respectively, had never thought of getting any help when they were distressed. In contrast majority (45.6%) of positively wellbeinged individuals had always seeked help from others when distressed & only 10.2% of them had never thought of it. Conclusion: Individuals who are psychologically well tends to seek help from others when in distress, while severely and moderately distressed individuals tend to avoid getting help from others. We recommend a public awareness programme to address this.

OT18-3

Trajectories of Depression and Their Relationship with Health Status and Service Use

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Purpose: This longitudinal study was conducted between 1994 and 2004 in a cohort of southern Taiwan community-living elderly residents. The study aims to explore the trajectories of depression and how these patterns differed between respondents who survived and those who died during data collection phases; this study

also investigated how health status change and health/social service use predicted the different trajectories of depression.
Design and Methods: Depression, chronic disease, disability and health/social service usage data were collected over six waves. Clusters of depression were used to define a categorical response variable. Baseline levels and new occurrences of chronic disease and disability, and the frequency of health/social service use during this period were chosen as the predictors of depression trajectories.
Results: Changes in levels of depression during the ageing process were identified. Different trajectories clearly reflected heterogeneity within depression and the association with mortality. The study highlighted that diabetes, gastrointestinal problems, heart disease and disability, whether at baseline or as new occurrences, were predictors of health decline. High use of health/social services were also predictive of increased depression.
Implications: These findings identified depression as a highly dynamic process, characterized by different trajectories of depression between states of no, mild and severe depression. Greater awareness of these various trajectories should potentially improve the prevention and/or management strategies of depression.

OT18-4

Psycho-Social Consequences and Resiliency amongst Widows Who Lost their Husband in Extra Judicial Killings in Jaffna Sri Lanka

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The death of a spouse causes various psycho-social consequences in young widows regardless of cause of death. But increased number of extra-judicial killings in Jaffna leads to abnormally complicated reactions among them. Aim of this study was to find out the psycho-social consequences in young widows who lost their husband in extra judicial killings. 47 widows were studied in this descriptive study. Pre-designed, interviewer administered questionnaire and culturally adopted Tamil translation of Inventory of Traumatic Grief (ITG) were used to collect data. More than 95% of killings made by fatal gun-shot injuries, and 23% of killings were witnessed by the widows, whose mean age was 27. According to ITG, 46.8% of this population had the diagnosis of traumatic grief (TG). The incidences of TG decreased significantly post-killing and also according to age of widow. TG was shown to increase with number of exposures to previous war stressors, and the women were witness to her husband's killing. The functional ability of the widows as determined by the survey decreased with increased TG. Seventy five percent of women surveyed expressed isolation from their community, and 28% experienced symptoms of Psycho-somatic diseases such non-specific joint and back pain. The study, although limited in scope and depth of assessment of the protective and risk factors, are significant in revealing the impact of such extra-judicial killings on women's psychosocial impact and survival. Further targeted interventions are needed to support such women; within conflict affected settings this forms a formidable challenge

OT18-5

Perceived Stress, Sources and Severity of Stress among Undergraduate Medical Students: A Cross-Sectional Questionnaire Survey from A Pakistani Medical School

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Background: Recently there is growing concern about stress during undergraduate medical training. However studies about the same are lacking from Pakistani medical schools. The objectives of our study were to assess perceived stress, sources of stress and their severity and to assess the determinants of severely stressed cases.
Methods: A cross-sectional, questionnaire–based survey was carried out among undergraduate medical students of CMH Lahore Medical College, Lahore, Pakistan during the time period of January to March 2009. Perceived stress was assessed using the perceived stress scale. A 33-item questionnaire was used to assess sources of stress and their severity.
Results: The overall response rate was 80.5% (161 out of 200 students). The overall Mean Perceived Stress! w! as 30.84(SD= 7.01) and was significantly higher amongst females. By logistic regression analysis, severely stressed cases were associated with occurrence of psychosocial [OR 5.01 (95%CI 2.44-10.29)] and academic related stressors [OR 3.17 (95%CI 1.52-6.68)]. The most common sources of stress were related to academic and psychosocial concerns. , 'high parental expectations', 'frequency of examinations', 'vastness of academic curriculum', ‘sleeping difficulties', ‘worrying about the future', 'loneliness', 'becoming a doctor’, ‘performance in periodic examinations' were the most frequently and severely occurring sources of stress.. There was a negative but insignificant correlation between perceived stress and academic performance (r=-0.099, p>0.05).
Conclusion: The higher level of perceived stress warrants need for interventions like stress management programs to reduce the negative impact of stress and hence improve quality of life for these students.

OT18-6

Self-Reported Depressive Symptoms among Internal Migrant Workers as Measured By the Center for Epidemiologic Studies Depression (CES-D) Scale in Shenzhen, China

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Objective: Purpose of this study was to assess depressive symptomatology and its correlates in a randomly selected sample of rural-to-urban migrant workers (MWs) residing in a metropolitan area in South China.
Method: Validated Chinese version of Center for Epidemiologic Studies Depression (CES-D) Scale which contains 20 items was administered by trained interviewers amongst 860 migrants working in 20 randomly selected factories. We also collected information on sociodemographic factors, self-rated health and behavioral risk factors by using a self-administered questionnaire adopted from a standardized national health survey question series.
Results: Of all MWs approached, 827 (96.2%) finished both CES-D and the additional questionnaire. Ranging from 18 to 52 years, the sample contains 387 (46.8%) males and 440 (53.2%) females. About 18.1% (150) of these MWs had a high level of depressive symptoms (CES-D total score >= 16, as recommended by L. S. Radloff) and the average score was 11.13 (SD = 5.72). No gender effect was observed (F = 1.457, p = 0.228), but marriage status was found to be associated with the total score with single workers having higher scores than those of their married counterparts (F = 4.519, p = 0.034). Monthly income and number of years presenting in the city were not proved to be potential correlates of CES-D total score. However, total score of CES-D was found to be positively related to overtime working hours per day and monthly drinking frequency while inversely related to self-rated health (SRH). Multiple logistic regressions indicated that those who are single (OR = 1.38, 95%CI =1.18-1.75), living in the dormitory (OR = 1.980, 95%CI =1.240-3.06), working over 10 hours per day (OR = 1.838, 95%CI =1.33-2.55), having less than 6 hours sleeping per day (OR = 1.548, 95%CI =1.11-2.15) and having lower SRH evaluation (OR = 0.655, 95%CI =0.579-0.740) are more likely to have a high level of depressive symptoms.
Conclusion: Findings of this study suggested that public health initiatives targeting at combating depressive symptomatology in MWs are needed and strategies should take the change of MWs' adverse living and working situation into consideration.

OT18-7

Avoidance Behaviors and Negative Psychological Responses in the General Population in Hong Kong in the Initial Stage of the H1N1 Epidemic

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Background: This survey investigated whether the general population in Hong Kong were avoiding visiting different places and were showing negative psychological responses due to the H1N1 at the "pre-community spread" stage. Factors associated with avoidance behavior and negative psychological responses were also explored.
Methods: Participants were selected by random telephone numbers and interviewed prior to the incidence of community spread of H1N1 in Hong Kong. A sample of 999 adult participants completed the interview.
Results: Avoidance behavior was prevalent among Hong Kong population. 76.5% of the respondents currently avoided going out or visiting crowded places or hospitals, whilst 15% felt much worried about contracting H1N1 and 6% showed signs of severe emotional distress. Females, older respondents, those having unconfirmed beliefs about modes of transmissions, and those feeling worried and distressed due to H1N1 outbreak were more likely than others to avoid visiting different places (OR=1.42 to 3.90, p<.05). Those who perceived high severity and susceptibility related to H1N1 and doubted the adequacy of governmental preparedness were more likely than others to feel severely distressed (OR=1.94 to 3.68, p<.05).
Discussions: Noticeable proportions of the population avoided visiting different places and exhibited negative psychological responses at the pre-community spread phase of the H1N1 epidemic in Hong Kong; Avoidance of visiting different place was not then advised by the government may be linked with anxiety. Public education at the initial stage of the epidemic is warranted to rectify these misconceptions and perceptions.

OT18-8

Polymorphisms and 1-C Metabolism in Patients with Depression

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Purpose: Associations between depression, 1-C metabolism and the polymorphisms of serotonin transporter (5-HTT: LL:LS:SS) (1), and methylene tetrahydrofolate reductase (MTHFR: C677T) (2) were studied as an adjuvant therapy for depression using folate supplementation.
Subjects and Methods: The polymorphisms and serum folate, homocysteine (tHcy) and vitamin B12 levels in

psychiatric outpatients (48 males and 39 females) were determined.
Results: Patients with serum folate of less than 7 ng/ml, and tHcy of more than 10 nmol/ml were 77 % and 79%, respectively. The gene variant frequency of MTHFR C677T (n=87) was 33% CC, 47% CT and 20% TT, and that of 5-HTT (n=77) was 60% SS, 38% SL and 2% LL. There were larger gender differences in serum folate (m: 5.2 2.4, f: 7.6 6.1 ng/ml), tHcy (m: 10.2 6.5, f: 6.2 3.4 nmol/ml) and vitamin B12 (m: 431 236.1, f: 487.2 268.7 pmol/L), than those reported reference ranges.
Discussion: Japanese are vulnerable to depression because of the high frequency of SS of 5-HTT (1), especially when combined with TT of MTHFR (2). The male-specific folate effects reported in the previous studies may reflect the gender difference found in the folate status.
Reference: 1. Yamakawa M et al. Biochem. Biophys. Res. Commun. 334: 1165-1171 (2005). 2. Hiraoka M et al. Ibid 316: 1210-1216 (2004)

Oral Track 19- Mental Health

OT19-1

Relationship between Menopausal Perception, Adaptation, and Sexual Life of Andropause Men in Bangkok Metropolitan

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The descriptive study explored the relationship between adaptation and perception on menopause and sexual life of andropausal men who live with their spouse in Bangkok Metropolitan, Thailand. A total of 400 androposal men were participated. Data were analyzed by using descriptive and analytical statistics. Results showed that the androposal men had an average age of 48 years (SD=5.15) and had average income of 500 USD (16,408 baht). Most of them (62.3%) had an annual medical check up. Common health problems were hypertension and oral health (27.6%). Most of them drank coffee (79.0%), alcohol (74.0%), used analgesic drugs (60.0%), and smoked cigarette (55.0%). Adaptation showed a strongly relationship to sexual life, satisfaction, affection expression, responsibility, and sexual relationship (r = 0.52, 0.46, 0.52, 0.51, and 0.31 respectively). Stepwise multiple regression analysis reveal that five factors including interdependence, perception on menopause, self concept, physiologic mode, and educational level can predict 46.4 % of variance of sexual life. This study suggests that adaptation is an important factor among andropausal men to predict sexual life. The public health implication should be promoted adaptation among andropause and menopause clients to improve couple sexual life and family well being.

OT19-2

Internet Addiction and Pathological Internet Use in Hong Kong: Prevalence and Correlates

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Objectives: To examine the prevalence and correlates of pathological internet use in Hong Kong.
Method: An anonymous, telephone survey was conducted on 1152 Chinese adults (15-54 years of age) in 2008 with a structured questionnaire to examine pathological internet use (PIU) and internet addiction (IA).
Results: The census age-standardized past-year prevalence of IA in Hong Kong was 1.9% among all males and 1.1% among all females and the prevalence showed the highest prevalence (6.6%) among 15-19 year olds and among the unemployed (9.4%). Pathological internet use was found in about 31% of males and 25% of all women. While normal users averaged 21 online hours/week, the weekly averages were 27.7 hours for low pathological users, 37.6 hours for high pathological users and 50.7 hours for internet addicts. A strong association was noted between level of internet pathology and the greater likelihood with most daily online activities but there was a negative association with using email and work-related use. Increasing maladaptive internet use was associated with various negative health effects such as greater likelihood of skipping meals and depression but not with greater likelihood of obesity or being underweight. Pathological users and internet addicts self-perceived their use to worsen their physical health, work productivity, and family relationships but were divided as to the effects on their social life and overall mental health.
Conclusions: Some subgroups of urban Chinese adults show a high prevalence of maladaptive patterns of internet use that negatively impinges on multiple domains of mental and physical health.

OT19-3

Association Study of Serotonin Receptor and Transporter Polymorphisms with Tardive Dyskinesia in Chronic Schizophrenia

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Background and Objective: Tardive dyskinesia (TD) is highly prevalent among patients taking antipsychotics. Although the pathogenesis of TD is still not fully understood, studies have reported TD is associated with serotonin genes. This study is aimed at exploring the association between the serotonin gene polymorphisms

(HTR2A T102C, 5-HTTLPR, HTR2C Cys23Ser) and chronic schizophrenic patients with or without TD.
Methods: Genetic association study with case control design was performed to analyze the allele and genotype frequencies of schizophrenia patients with TD (n=32), patients without TD (n=135), and normal control participants (n=91). All participants are Ethnic Han Taiwanese. Genotyping of HTR2A T102C polymorphism, 5-HTTLPR polymorphism and HTR2C Cys23Ser polymorphism were performed by polymerase chain reaction-based restriction analysis. Odds ratios (ORs) and 95% confidence intervals (CIs) were computed by multivariate logistic regression analyses after adjustment for age, gender, education years, marital status, job status, alcohol drinking, smoking and diabetes.
Results: The C allele frequency of HTR2A is 29.7% in TD group and 45.6% in non-TD group (P=0.021). Patients carrying C allele were likely to be protected from TD (OR=0.26, 95% CI=0.10-0.71, P=0.008 for dominant mode; OR=0.40, 95% CI=0.19-0.86, P=0.019 for additive mode). However, no association between 5-HTTLPR and HTR2C polymorphisms and TD was found. HTR2A T102C was associated with TD in subgroup of older than 50 years (OR=0.28, 95% CI=0.10-0.84, P=0.022) and men (OR=0.033, 95% CI=0.003-0.37, P=0.006). Conclusion: Our findings supported that HTR2A T102C polymorphism was associated with the risk of antipsychotics-induced TD in chronic schizophrenic patients in Taiwan.

OT19-4

Exposure to Family and Community Violence and Depression among Adolescent Students in Cambodia

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In post-conflict Cambodia, adolescents continue to suffer from violence and subsequent psychological disorder. This study examined the association between exposure to violence and depression among 1,943 students randomly selected from 11 junior high and high schools. We measured both family and community violence and non-violence factors including family support function and school attachment. For violence experiences, 24.8% of participants had been victimized by and 35.7% had witnessed family violence. Twelve percent had been victimized by and 60.9% had witnessed at least one case of community violence. After adjustment, depression remained significantly associated with family-violence victimization (β= 0.12, SE= 0.77, t= 4.68, p=< 0.001), community-violence victimization (β= 0.09, SE= 0.38, t= 3.48, p= 0.001), community-violence witnessing (β= 0.07, SE= 0.21, t= 2.59, p= 0.010), possibility of dropping out of school (β= 0.12, SE= 0.62, t= 5.20, p< 0.001), family structure (β= 0.07, SE= 0.69, t= 3.12, p= 0.002), family income (β = - 0.08, SE= 0.61, t= - 3.20, p= 0.026), and gender (β= 0.11, SE= 0.62, t= 4.77, p< 0.001). Exposure to violence plays an important role in the development of depression among adolescent students in Cambodia, while family support and school attachment have only limited protective effects. Efforts for depression prevention and intervention should focus on family and community violence reduction targeting students in families with low socio-economic conditions.

OT19-5

Internet Addiction and Associated Factors among University Students in China: A Cohort Study

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3. University of Macau, Macau

Objectives: To determine the prevalence and incidence of Internet addiction and the associated socio-behavioral correlates among university students in China. Methods: In 2007, a cohort study was commenced on 2000 university matriculants in Hong Kong, Macau, and Kunming, China using self-administered questionnaires. Follow-up questionnaire-based surveys on these students were commenced in 2009. Results: In 2007, 5.2% of students in Hong Kong, 8.8% in Macau, and 1.1% in Kunming were identified as Internet addicts using the Chen's Internet addiction scale. In the follow-up survey, it was discovered that more than 10% of the non-internet addicts in Hong Kong subsequently became Internet addicts halfway through their studies. The risk of developing Internet addiction was twice as high for students coming from the mainland China than local students. Dissatisfaction with university life, breaking up with romantic partner, higher levels of social anxiety, and depression were significantly associated with increased incidence. Follow-up surveys for Macau and Kunming are in progress. Conclusion: The study results support the contention that, with less parental control and greater Internet accessibility, the prevalence of Internet addiction increases among students after university enrolment. Interventions directed at Internet addiction in this population should bear in mind the psycho-social characteristics of students that may underlie the development of pathological internet use.

OT19-6

Factors Associated with Depressive Disorder among High School Students in Surin Province, Thailand

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Introduction: Depressive disorder (DD) is a common psychiatric disease with severe consequences such as loss of life quality and suicide. Previous studies have found associations between DD and socio-demographic, psychosocial, economical, and religious factors. The purpose of this study was to study the relationship between these factors and DD in Thai settings.
Methods:A total of 257 high school students aged 15–19 years were randomly selected from two high schools in Surin Province. A self-administered questionnaire was used for data collection. CES-D (Center for Epidemiologic Studies Depression Scale) was used to assess DD, which was defined by a CES-D score of 22 or more. The associations between socio-demographic factors, relationship with family and friends, psychosocial traumas in the past, income, Internet use, religious practice and DD were tested by Chi-square and Pearson's correlation.
Results: The factors significantly associated with DD were: Alcohol consumption, good relationship with parents, negatively related, good relationship with friends, negatively related, ending of romantic relationship, monthly income >1800 THB, insufficient income, regular pain, headache, BMI ≤23, low degree of religious practice, negatively related, uncertainty about being obese, and not seeing the world as a good place to live.
Conclusion: The study showed a high prevalence of DD and several factors significantly associated with it. Further larger studies are needed to explore in more detail about Internet use, religious practice, and economical factors and their associations with DD.

OT19-7

The Clinical Features, Symptom Presentation and Familial Aggregation in the Major Depressive and Bipolar Disorders in the Southern Taiwan

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3. National Taiwan University, Taiwan

Background: Affective disorders, mainly depressive (MDD) and bipolar disorders (BPD, including BP I and BP II) are common in the general population. However, little is known about their clinical characteristics and familial aggregation. Objects: To investigate the demographic and clinical features for MDD and BPD in Taiwan, and to evaluate the familial aggregation on social relation.
Methods: There were 689 participants ascertained from three hospitals in the Southern Taiwan. Participants were interviewed by well-trained interviewers using the Composite International Diagnostic Interview to collect data on demographic and clinical features. Information on proband's symptoms endorsement were also obtained from family members. Familial aggregation on social relation was evaluated by mixed models.
Results: The males to females ratio in MDD was twice as many females as males, and was equally prevalent in BPD. MDD patients had higher proportion as married than BPD. About ninety percent of mood disorder patients had low socioeconomic status. BPD had early onset age and more depressive/manic episode frequency than MDD. Probands with severer impairments tended to have fewer contact with friends. There exhibited familial aggregation in social dependence ($p<0.0001$, ICC=0.14). Similar numbers of depressive symptoms were reported by MDD proband and their family members. However, BPD's family members provided more manic symptoms than those noticed by proband.
Conclusions: MDD and BPD are serious mental disorders with familial aggregation on social relation in Taiwan. Family members provided extra information in symptoms presentation in depressive and manic episodes.

Oral Track 20- Primary Healthcare and Public Health

OT20-1

Integration of Lifelong Learning for Health through School Network for School Children in the Northeast of Thailand

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A quasi-experimental research aimed to conduct a project for health promotion for school children in the Northeast of Thailand. The application of a school network provided social support and methods to enhance knowledge and create a lifelong interest in health issues. School network participants included 54 of school administrators, teachers, parents, and community members to implement the network activities. Fifth and sixth grade students co-operated in the attempt while 206 students joined the experimental group and 186 students the control group. The study was conducted for 16 weeks of interventions and 16 weeks of follow-up. A self-administered questionnaire, in-depth interviews and focus group discussions were used. Statistical analysis percentage, mean, standard deviation, independent t-test, paired t-test, and one way ANOVA was applied.
The school network succeeded in establishing, and improving close social contacts and ties, as well as social support ($p<0.001$). The results of integrating process of lifelong learning for health for school children composed of AIC process, various programs, new health clubs and sport competition, leading school policy to practice.
The results indicated that a school network improve school children's knowledge and attitude towards health. After intervention, the experimental group significantly had better knowledge, attitude towards maintaining health and improved their healthy behavior than that before the experiment and above that of the control group ($p<0.001$). It is concluded that a school network

for improving health for school children effectively and can be applied to students in other primary schools.

OT20-2

The Development, Achievements, and the Future of Primary Health Care in Malaysia

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Primary Health care was implemented in Malaysia after the Alma Ata meeting in 1978. A national review was undertaken to identify the 'underserved' areas for Primary Health Care (PHC). The three-tier rural health infrastructure (main health centre, health centre, midwife clinic) were reviewed to identify where the WHO 8 elements of primary health care were being delivered. The areas where the villages were not 'served' the elements of PHC an immediate plan was to provide mobile services from the nearest health centres. For a long- term plan health centres were identified to serve the 'underserved' villages. By 1990 most of the country was covered by PHC and the need for expansion of other services to the health centres was needed. This was due to the demand in services and the demographic transition of the population. This new concept was known as 'Expanded scope of PHC' in Malaysia and the new elements are being provided in most of the health centres. The 'expanded scope of PHC' includes programmes such as care of the elderly, adolescent health, care of the handicap, mental health, and wellness programme. The PHC has been very effective as there has been a progressive decline in mortality rates in the country. However socio-economic development has also played a major factor in the improvement of health status of the people. The future challenges of PHC includes escalating cost, globalisation, changing pattern of diseases, emerging diseases, urban health problems, teleprimary care and quality.

OT20-3

Stable J-Shaped Prospective Relationship between BMI and High Medical Expenditure from Taiwan Cardiovascular Pooling Project: Implications for Defining and Preventing Obesity

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Objective: Using medical expenditures as an indicator of all-cause morbidity to compare the relationships of body mass index to high expenditures and to mortality in order to provide a new prospective for defining obesity. Design: Prospective cohort study. Setting Seven existing cohorts established before 1997 in Taiwan. Participants A total of 241,936 people from communities and worksites was complied for Taiwan cardiovascular pooling project. Main Outcome Measures Death and high medical spending (for individuals in the top quartile) derived from databases of death certificates and the National Health Insurance in Taiwan from 1996 to 2002. Results: Hazard ratios for death and for high medical spending in various body mass index groups were estimated by Cox and logistic regressions, respectively, stratified by gender and age (20-39, 40-59, and ≥60 years old). Body mass index predicted all-cause mortality in an expected U-shaped manner with higher body mass index concave points for older age groups. However, a higher baseline body mass index was associated with greater medical expenditures in a consistent J-shaped manner. There was a relatively fixed low point in most gender/age groups at the grouping for body mass index between 18.5 and 19.9. Medical claims that could be attributed to large body mass indices were also estimated. Approximately 13% of National Health Insurance claim costs could be eliminated if all Taiwanese adults lowered their body mass indices to below 22 (the 20-21.9 is the group next to the 18.5-19.9 on the right). Conclusions: The consistent J-shaped temporal relationship between body mass index and medical expenditures across age/gender groups does not support a higher body mass index cut-off for the elderly, and information on population-attributable expenditures should be considered when determining BMI-related public policy.

OT20-4

Exploring Chronic Disease Self-Efficacy of Taiwan Elderly and Associated Factors

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Objective: To examine the chronic disease management self-efficacy of Taiwan elderly and explore the association with demographic factors, health status, physical limitation, and life satisfaction.
Methods: The data come from the Survey of Health and Living Status of the Elderly in Taiwan that interviewed 3,727 respondents aged 54 and over in 2007.
Self-efficacy was measured by 7 questions adopted and modified from Stanford Chronic Disease Self-Efficacy Scales. Multi-logistic regression was performed to examine the effects of associated factors on self-efficacy.
Results: Over 80% of respondents had high self-efficacy on expressing illness to physician or complying with medical prescription, while only about half of them had self-efficacy on regular exercise, managing physical discomfort and motional distress. Those who are younger, higher education attainment, have paid job, better self-rated health status, less physical limitation, or have higher satisfaction on life, economic condition or living arrangement also have significantly higher self-efficacy on chronic disease management. The findings highlight the needs of more assistance on daily disease management of elderly.

OT20-5

Development of A Model for Communicable Disease Surveillance System in Health Centres in A Province in Northeastern Thailand

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4. University of Oxford, UK

This action research aimed to develop a model for communicable disease surveillance system at the health centres, by selecting to study purposively 11 health centres, 1 District Health Office, 1 community hospital and 8 sub-district administrative organizations. There were two distinct sets of observations. The first was based on medical records from 11 local health centres during 2006. The second was 50 local officers from that work place. Quantitative data were collected through reviewing medical records. Qualitative data were obtained through four focus groups and 18 interviews. The results of the early stage showed the health officers lacked knowledge, confidence in some disease diagnosis and using less definition in reporting. The data could explain real situations occurred in local areas only 50.8%. Sensitivity was low for common diseases. Moreover, the supporting system was at a low level. However, through participating, the health officers gained vital knowledge in system. They also learn how to report cases, diagnose disease in reporting systematically and continuously to provide knowledge to do their work. They demonstrated a greater sense of consciousness and were able to improve the surveillance system. Moreover, they learned to communicate and cooperate with others to strengthen the surveillance networking. This study illustrated that the surveillance system at the health centres must be improved because it is to become an important mechanism for sustainable prevention and control of diseases. This study could be an example for the health officers to apply the model to fit each particular setting.

OT20-6

Attitudes and Behavior towards the Use of Traditional Chinese Medicine amongst Western Medical Doctors in Hong Kong

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Background: With the reunification of mainland China and Hong Kong in 1997, the government has launched policy initiatives in developing traditional Chinese medicine (TCM). This study aims to describe the attitude and clinical behaviour of western medical doctor (WMD) toward TCM.
Method: A three waves, cross sectional mail survey amongst WMD using a random sample drawn from the full and limited registration lists of the Hong Kong Medical Council (n=3320). Results: The response rate was 34%. Acupuncture is the TCM modality that most WMD had ever referred their patients (13.8%). Multinomial logistic regressions showed that favorable attitude on TCM knowledge and evidence, personal use of TCM, and prior TCM education were the major positive predictors for referral. Public sector environment seemed to hinder referrals to TCM. Qualitative comments on the areas of (1) paradigm differences between WM and TCM, (2) facilitators for and barriers in collaboration and integration, and (3) need in policy level initiatives for integration was observed.
Discussion: Our findings suggested that Hong Kong WMD tended to express concerns on the lack of, or inaccessibility to, the clinical evidence on TCM. Patients' choice on TCM seemed to be of secondary importance. The link between personal use of TCM, prior TCM education and favorable behavior towards integration implies the potential benefits of adopting experiential TCM educational strategies for WMD. In longer term policy makers may consider the establishment of a TCM-WM inter-professional collaboration platform such that cross modality service coordination could be improved.

OT20-7

Population Stabilization Efforts in India

Pramod Chandra Samantaray

National Population Stabilization Fund, India

In perfect tandem with Comprehensive Health Care Delivery efforts Key to Health, Peace and Harmony By Pramod Samantaray Principal Program Coordinator National Population Stabilization Fund A Govt. of India Society Ministry of Health & Family Welfare New Delhi-110066 India Early marriages and subsequent early pregnancies with married couples especially in rural areas, have been significantly contributing to high MMR/ NMR/ IMR in India through out, in the recent decades. Most families welcome frequent child births as means to compensate for the tragic impact of high IMR; thereby directly contributing to high TFR in a number of states, needing special attention of the Federal / state Govt.s. National Rural Health Mission, launched in April 2005 in India has been a historic initiative towards removing regional disparities with regard to said health indices. The National level of MMR of 301 in the years 2001-03 has dropped down to 254 by the year 2006. The IMR figure for the year 2004 has since been reduced from 59 to 55 in 2008. The crucial figure of TFR 3.1 in the year 2004 has been reduced to 2.7 by end of 2008. India is thus poised to emerge as a global example with regard to Peace, Health and Harmony. The presentation offers a comprehensive country's health scenario in the context of acceptable parameters of multi-sectoral development on one hand and reasonable degree of demographic stability in the country by the next decade, on the other.

Oral Track 21- Primary Healthcare and Public Health

OT21-1

Primary Health Care and Health Equity Vis-A-Vis New Sources of Financing in Less Devloped Indian Settings

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Objectives: 1. To assess the contribution of alternative financing schemes to access to primary health care. 2.To assess the contribution of alternative financing schemes to health equity Methods: We used household surveys, in-depth interviews and focus group discussions to collect the information. In the first stage, we conducted household surveys in 20% of the total rural households each from three districts of Orissa. In the second stage, we conducted focus group discussions for the beneficiaries of alternative financing schemes for primary health care, identified through the household survey.
Results: Out of the total 4200 households surveyed in rural Orissa, 3450 (82%) households are part of partnership financing schemes. Out of these, 2650 (77%) are enrolled into health insurance, the rest use NGO linked micro -credits as source of health care financing.Though all of the schemes (58%) are not specifically addressed for a particular vulnerable community, 68% of the beneficiaries are marginalized such as economically backward, disabled, women, elderly, children and indigenous population. There is an improvement in the health seeking behavior of the vulnerable groups (64%), increment in the out patient cases of public health care facilities (38%) and effective utilization of Indian systems of medicine (35%).
Conclusion: Alternative sources of financing such as partnership schemes contribute to access to primary heath. The schemes also contribute to the essential health care of vulnerable groups.

OT21-2

Estimating the Costs of Delivery of Primary Health Care: A Coverage Target Based Approach from Aceh, Indonesia

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Background: Recently there is growing interest in the development of costing tools. However, most of the current tools were developed for use at national level. For decentralized government where planning and budgeting are at sub-national level, a micro level of costing tool is required. The objective of this study was to develop a simple and transparent costing tool which enables health planners to calculate the unit costs of providing basic health services in order to estimate additional budgets required to deliver services in accordance with national targets.
Methods: The tool was developed using a standard economic approach. The input activities were defined as the component activities required to achieve the nominated level of outputs. Outputs were defined based on six national priority programs. Costing for the inputs was focused on operational costs. The model development was based on intensive consultation and engagement with local health officers. Data and relevant information was derived from a survey and in-depth interview
Results: A simple and transparent costing tool consisting of 16 linked Microsoft Excel worksheets has been developed and tested. The model provides the calculation of unit costs per coverage target of a specific program (such as pregnant mother or under 5 child) as well as aggregated per head of general population.
Conclusion: This costing tool can be used by health planners to estimate additional money required to achieve a certain level of coverage of health programs and it can be adjusted for different costs and program delivery parameters in different settings

OT21-4

Disability among Elderly in Western Maharashtra: How Are They Living?

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Background: Despite overall socioeconomic development, improvements in living standards and effective public health measures most of our preceding results are mired by poor health conditions of elderly with high prevalence of co-morbid conditions and activities of daily living (ADL) disabilities. With an increasing role being assigned to market forces, lack of social security schemes and degenerating nature of old age diseases, it is said that elderly Indian have apparently run out of options. The objectives were to estimate prevalence of ADL disabilities and to identify its correlates among elderly population in western Maharashtra, India.
Methodology: In this cross-sectional study, 275 randomly selected rural elderly subjects were studied using a structured interview schedule that included the special tool (Indian health assessment questionnaire) to estimate the prevalence of ADL disability. Data analysis was done in SPSS (version 15.0). Ethical clearance was obtained.
Results: The prevalence of ADL disability was 5.8% (Men=5.3%, Women=6.3%). In bivariate analysis age, poor physical and mental health, visual and communication difficulty were significantly associated

with ADL disability. In logistic regression analysis, it could be established that the history of chronic illness [OR=10.87 (1.84-62.5)], depression [OR=13.33(2.2-83.33)] and poor social participation [OR=10.41(1.71-62.5)] were statistically significantly associated with ADL disability.
Conclusion: The burden of ADL disability was associated with modifiable factors. Hence, a holistic and intersectoral approach for promoting physical and mental health of elderly is the need.

OT21-5

Assessing Influenza Vaccination Policy for the Elderly

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Objective: To assess the effect of free influenza vaccination policy for the elderly citizens on their expenses and utilization of medical care.
Method: This study analyzed utilization data of the elderly abstracted from 2004-2006 National Health Insurance Research Database (NHIRD). 398,449 elderly citizens who didn't receive the flu vaccination between September 2004 and January 2005 were divided into two groups. 89,773 elderly citizens who received the influenza vaccination between October 1 to October 15, 2005 were classified as the case group and the rest (308,676 elderly citizens) were classified as the control group. Both groups were compared with their medical expenses and utilization in acute respiratory tract illness in inpatient, emergency and outpatient by difference-in-difference analyses and multiple linear regressions.
Results: After controlling for sex, age, and Elixhauser comorbidities, the case group had fewer increases in inpatient expense, total medical expenses, and length of stay in acute respiratory tract related illness. Receiving influenza vaccination could significantly reduce the increase of medical expenses and utilization.
Conclusion: Influenza vaccination for the elderly could significantly reduce health expenses in acute respiratory related tract illness for elderly patients. Therefore, free influenza vaccination policy for elderly citizens should be promoted.

OT21-6

To Evaluate the Effectiveness of Diabetes Shared-Care Program in Taiwan Using the Sequential Quality Indicator of Glycosylated Hemoglobin

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The increasing prevalence and cause-specific mortality in recent years have made diabetes (DM) a crucial public health threat to Taiwan. As reported by Voorham in 2008, sequential quality indicators, including improved or being controlled, are much better for evaluating the effectiveness of DM intervention programs than currently used cross-sectional indicators. However, no studies have been performed to evaluate DM intervention programs using sequential quality indicators. This is the first study to evaluate a DM intervention program (Diabetes Shared-Care Program in Taiwan, DSCP) using sequential quality indicators. Current and newly identified type 2 DM patients from the outpatient clinics of a community hospital between 10/01/2007 and 01/30/2008 were recruited. These patients who were regularly followed up for more than three months before enrollment were assigned to the DSCP group (N=120). Others were assigned to the usual care (UC) group (N=99). Demographic data and other confounders were collected as the independent variables of the multivariate logistic regression model. The sequential quality indicator of glycosylated hemoglobin (HbA1C) was the dependent variable of the model. All patients were followed up for 12 months. Seventy-two (60%) of the DSCP patients and 42 (42.4%) of the UC patients showed significant improvement after 12-month follow-up as demonstrated by the sequential quality indicator of HbA1C (p-value=0.010) using bivariate analysis. After controlling for confounders, the DSCP significantly predicted the better sequential HbA1C (O.R.=3.34; 95% C.I.=1.61~6.94; p-value=0.001). Our study showed that the DSCP is significantly associated with better outcomes for type 2 DM patients as demonstrated by the sequential HbA1C.

OT21-7

New Opportunities for Health Care in the Philippines: Integrating the Care of Older Persons into Public Health Systems

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Objective: Economic growth and developments in health care has increased life expectancy leading to the rise of the elderly population in the Philippines. This obviates the need for more comprehensive approaches in the care of older persons at the local level. This study analyses the existing health programs for older persons within the socio-cultural and institutional frameworks and identifies opportunities for development.
Methodology: Focus group discussions of key informants and stakeholders were conducted in Bukidnon to identify the socio-cultural aspects, existing programs, local government support, and challenges for

health care of older persons. Triangulation of results was done to determine areas for consideration in integrating care for older persons within the public health system.
Results and Discussion: Health care for older persons can be improved within the framework of existing community structures. Elderly Filipinos are open to the possibility of being cared for by non-family community members. Socio-cultural considerations, current health challenges, existing community and public health activities, institutional support, and opportunities are discussed.
Conclusion and Recommendation: Integration of care for older persons within the public health system requires holistic approaches, financial support strategies, capacity enhancement for the health workforce, and community involvement.

Oral Track 22- Primary Healthcare and Public Health

OT22-1

Cost Effectiveness of Type 2 Diabets Screening among Rural Population of Qazvin in 2007: Family Physician Project

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Introduction: Application of economic analysis is one of the decision making elements concerning priority setting and effectiveness of provided services.
Objective: To assess the residents' needs in clinical teaching in order to prepare an educational module to increase their teaching clinical skills. Material and methods: In this descriptive – analytic study, we selected 14 Rural Health Centers to estimate unit cost of diabetes screening in Qazvin family physician project. The project covered 94318 people of over 30 years. The effectiveness has been measured by disability adjusted life years resulting from diabetes screening results. Statistical procedure and the second version of DisMod software were used for data analysis.
Findings: Total life years saved by diabetes screening project in Qazvin's rural population is about 291.24 years and total cost of this project is about 424733000 Rials ($45000). Incremental cost effectiveness of doing screening project to save each life year in Qazvin's rural population is 101722024 Rials ($10500).
Conclusion: The result implies that this project is cost effective.

OT22-2

The Effects of Healthcare Staffing on Mortality Rate in Taiwan: A Longitudinal Analysis from 1998 to 2007

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Objective: Literature review shows that physician supply has a negative effect on population health. This study was aimed to investigate the relationship between healthcare staffing and mortality rate in Taiwan.
Method: Data of healthcare staffing and mortality rate of 368 townships in Taiwan from 1998 to 2007 were retrieved from the yearly Bulletin of Manpower Statistics, Department of Health. Socioeconomic status including population density, average household income, racial/ethnic composition, education, unemployment rate and aging index were obtained from National Statistics, Department of Internal Affair, Taiwan. Statistical analysis including ordinary least squares (OLS) model for cross-sectional analysis and generalized estimating equation (GEE) model for longitudinal analysis were performed to study the effect of healthcare staffing on the mortality rate.
Results: Our results showed that there was a significantly negative association between all kinds of healthcare staff, except LVN, and the mortality rate in cross sectional analysis using OLS model. In the longitudinal analysis with GEE model, we found the number of physician and dentist per thousand were negatively associated with the crude mortality rate among 368 townships. Increasing the number of physicians and dentist by one per thousand will decrease the mortality rate by 0.4% ($p<0.05$) and 4.8% ($p<0.05$), respectively.
Conclusions: The physician and dentist supply have a negative effect on mortality rate in Taiwan. The dentist density has a better prediction on mortality rate than the physician, which might represent uneven distribution of healthcare staffing, and rather than a true effect on mortality.

OT22-3

Low Serum Bilirubin Level as An Independent Predictor of Stroke Incidence: A Prospective Study in Korean Men and Women

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Background and Purpose: Bilirubin is not only a waste end-product but an antioxidant. Bilirubin is known to be associated with decrease in cardiovascular risk in men, but its relationship to stroke was not clearly understood.
Methods: Serum bilirubin concentrations were measured in 78 724 health examinees (41 054 men, aged 30-89 years) from 1994 to 2001. The subjects with potential hepatobiliary diseases or Gilbert syndrome were excluded from analysis. Stroke incidence outcome was collected from hospital admission records due to stroke from 1994 to 2007.
Results: Serum bilirubin measurements were divided into 4 levels: 0-10.2, 10.3-15.3, 15.4-22.1, and 22.2-34.2 μmol/L. The number of stroke cases was 1137 in men and 827 in women. In Cox proportional hazard models, participants with a higher level of bilirubin showed lower hazard ratios in men with ischemic stroke after adjustment for multiple confounding factors compared to

the lowest level of bilirubin [Hazard ratio (HR) 0.72, 95% confidence interval (CI) 0.58-0.90 in level 3; HR 0.66, 95% CI 0.49-0.89 in level 4; p for trend= 0.016]. The risk of all stroke types also decreased as bilirubin levels increased (HR 0.81, 95% CI 0.68-0.97 in level 3; HR 0.74, 95% CI 0.58-0.94 in level 4; p for trend=0.0071). However, these associations were neither seen in hemorrhagic stroke nor seen in women. Conclusions: These findings suggest that serum bilirubin might have some protective function against stroke risk in men.

OT22-4

Expanded Program on Immunization in Bangladesh: Assessing Coverage and Gap in Two Selected Districs

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The study assesses the child immunization coverage through Expanded Program on Immunization (EPI) and performance in two districts namely Jessore and Satkhira in Bangladesh from 2005 to 2007. Target was assessed from the information of Geographical Reconnaissance (GR) report of Bangladesh Health Service, further classified by sub district level, namely Upazila coverage. The purpose is to look at the identify flaws by areas in need of further program attention. The analysis shows the irregular number of vaccination coverage for various types of vaccination; for example the coverage for BCG is not the same for coverage of DPT1 in the same area at same coverage period. It also shows lower coverage over time from BCG to Measles peaking at the coverage time of DPT2. Among the areas studied here, Jessore Municipality has the poorest coverage needing attention whereas Shyamnagar is the 2nd poorest on EPI coverage. After aggregating total coverage we further analyzed removing Municipality and find that not only Jessore Municipality, overall coverage is significantly decreased over time in almost all upazila level, indicating default children prevailing with incomplete immunization. Previous studies have shown that the coverage of child immunization was significantly associated with proximity to outreach clinics and the presence of a health worker in the community. Future studies would investigate the possible contributory factor responsible for the flows in coverage on EPI in the mentioned areas in Bangladesh and to think for alternative approaches for the successful coverage on EPI.

OT22-5

Incidence Rate and Influential Factors of Missed Injuries in Major Trauma Patients

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Objective: This retrospective cohort study was to determine the incidence and influential factors of missed injuries in major trauma patients.
Methods: Medical records on all 976 trauma patients admitted to intensive care units in a tertiary care hospital from January 2006 to December 2007 were reviewed. Missed injuries were defined as those unidentified in the emergency department but recognized later in intensive care units. Injuries with the Abbreviated Injury Scale of ≥ 2 were defined to be clinically significant. Cox regression analysis was applied to control confounders and identify independent risk factors associated with occurrence of missed injuries.
Results: There were 133 missed injuries in 118 patients, for a missed injury prevalence of 12.1%, and 87 of these missed injuries in 78 patients were clinically significant. The incidence rate per 100 person-hours was 3.2 for missed injuries and 2.1 for clinically significant missed injuries. The most commonly involved body region of missed injuries was the head, followed by soft tissues and extremities. Cox regression analysis showed that younger ages, higher levels of injury severity, polytrauma, and absence of soft tissue injury were significantly associated with missed injuries, and younger ages, higher levels of injury severity, and presence of chest and pelvic injuries were significantly associated with clinically significant missed injuries.
Conclusions: A considerable amount of injuries can be undetected in the emergency department. Younger ages, higher severity levels of injury, polytrauma, and presence of chest or pelvic injury are related to occurrence of missed injuries.

OT22-6

The Impact of Type 2 Diabetes on the Development of Hepatocellular Carcinoma in Different Viral Hepatitis Statuses

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Background: The risk of type 2 diabetes on the development of hepatocellular carcinoma (HCC) remains inconclusive in different hepatitis statuses.
Methods: We prospectively followed a community-based cohort with 5929 persons (4117 seronegative, 982 anti-HCV(+), 696 HBsAg(+), and 134 co-infected) in southern Taiwan from January 1997 through December 2004. Before the study, 546 participants had developed diabetes. HCC diagnoses were from the National Cancer Registry.

Results: After 50,899 person-years of follow-up, 111 individuals had developed HCC. The highest risk for HCC, compared with seronegative individuals without diabetes, was in anti-HCV(+) individuals with diabetes [incidence rate ratio (IRR), 76.0], then co-infected (IRR, 46.0), anti-HCV(+) without diabetes (IRR, 26.1), HBsAg(+) with diabetes (IRR, 21.4), and seronegative with diabetes (IRR, 7.2) (P < 0.001). Anti-HCV(+) (n = 132) and seronegative individuals (n = 352) with diabetes had a higher cumulative incidence rate of HCC than those without diabetes (log-rank test, P < 0.001). Multivariate Cox proportional hazards analysis showed that gender, age, BMI 30, HBsAg(+) [hazards ratio (HR), 12.6], anti-HCV(+) (HR, 18.8), co-infection (HR, 25.9), and diabetes [HR, 2.7; 95% confidence interval (CI), 1.7-4.3] were independent predictors of HCC (P < 0.05). After stratifying hepatitis status in multivariate Cox analysis, diabetes was significant for seronegative [HR, 5.4; 95% CI, 1.7-17.1] and anti-HCV(+) individuals [HR, 3.1; 95% CI, 1.7-5.4]. BMI 30 was significant for HBsAg(+) individuals [HR = 3.3, 95% CI, 1.3-8.1].
Conclusion: Type 2 diabetes is a strong independent predictor of HCC in anti-HCV(+) and seronegative individuals but not in HBsAg(+) individuals.

Oral Track 23- Occupational & Environmental Health

OT23-1

Oxidative Stress Study on Nickel-Exposure Workers

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Nickel chloride, nickel subsulfide, and other nickel compounds are carcinogenic in laboratory animals. Epidemiologic studies have shown an increased incidence of cancers among nickel refinery workers. Poly circuit board (PCB) production is a big industry in Taiwan. Nickel electroplating is a required process during the PCB production. During the above operation workers have been exposed to nickel solution or aerosol via skin or respiratory tract. We performed oxidative stress biomarkers assay on 227 nickel-exposed workers from electroplating shops in a PCB plant to study nickel –induced pathogenesis. The 98 high nickel-exposed (urine nickel > 6 ug/g Cr) workers had significantly (p=0.02) higher MDA level than 57 low nickel-exposed (urine nickel < 3 ug/g Cr) workers after controlling for other factors. The high nickel-exposed workers had significantly (p < 0.0001) lower GSH level, and 72 mid-exposed (urine nickel >=3, <= 6 ug/g Cr) workers had significantly (p=0.02) lower GSH level than low nickel-exposed worker after controlling for others. The high nickel-exposed workers had significantly (p=0.001) lower SOD level, and mid-exposed workers had significantly (p=0.028) lower SOD level than low nickel-exposed worker after controlling for others. The high nickel-exposed workers had significantly (p=0.089) higher 8-OH-dG level than low nickel-exposed worker after controlling for others. The above result indicates that nickel exposure can induce oxidative stress as lipid peroxidation (MDA) and reduce anti-oxidative enzymes as GSH, SOD, and induce oxidative DNA damage as 8-OH-dG and confirms that oxidative stress plays an important in nickel –induced pathogenesis.

OT23-2

Increased Mortality Risk of Occupational Respiratory Diseases and Lung Cancer in Mongolia: A Follow-Up Study for 20 Years

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Objective: To analyze the standardized mortality ratios (SMR) for major occupational diseases in Mongolia based on the registered data of the National Center of Occupational Diseases in Mongolia.
Method: We established the life tables for the registered cohort of occupational diseases and the general population of Mongolia by linking with all registered death certificates during 1986-2006 obtained from the State Centre for Civil Registration. We estimated age-, gender-, and cause-specific mortality rate and SMR. The computation is performed on the LTAS.Net program.
Results: A total of 4598 cases certified as occupational diseases were included with 98751.9 person-years at risk accrued, in which 9% were deceased during the observation period. The overall SMR was 0.34, indicating a healthy worker effect. But there were increased SMR's for lung cancer (4.8, 95% CI 2.6, 8.1) and respiratory diseases (ORD) (4.8, 95% CI 4.0, 5.6). About 2/3 of deceased cases of lung cancer once worked in mining, 22.1% in construction and 10.3% in power plants. One-third of the deceased cases with lung cancer were attributable to silicosis/anthraco-silicosis, 32.4% to asbestoses. Another major source of increased SMR can be attributable to pneumoconiosis, of which there were 132 deceased workers and no such case in the general population without exposure.
Conclusion: Quick industrialization accompanies with an increasing trend of mortality risk of ORD, lung cancer in Mongolia. Proactive prevention and the enforcement of all regulations related to OSH are urgently needed.

OT23-3

Diarrhea and Sanitation in Developing Country Indonesian

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Diarrhea disease is a common cause of death in developing countries and the second most common cause of infant deaths worldwide. According to WHO (2003) there were 4 millions cases occurred in the world at the

year of 2000 with 2,2 millions death, mostly were children below five (5) years old. Diarrhea disease is a disease based on environmental condition which still major issues for health problem in Indonesia with mostly victims below five years old babies. It shows that the infants death cause of diarrhea tend to death results,as an extra ordinary accident. As a developing country, Indonesia death infants almost 162 thousands of infants below five years old or around 460 babies die every days. The Survey of SKRT (Survey Kesehatan Rumah Tangga) or healthy of the residence in Indonesia indicate that diarrhea disease become the second dead causes for babies below five and number three for babies and number five for all of ges. Each Indonesian kids has diarrhea episode of 1.6 – 2 times per year. Some of 41 munipalicities district at 16 provinces reported KLB (extra ordinary accident) in their area. The amount of diarrhea cases reported 10..980 and 277 of them were dead. The awareness of clean water is too low, bad sanitations, minimum availibality and sosial misbehave / unhealthy. NTT (Nusa Tenggara Timur) has the highest record of 2194 people, meanwhile east java, central java and west java around 196 thousands people. Any research with Chi-Square shows there are any relation between basic home sanitation equipments to diarrhe disease of infants below five years old with $p < \alpha$.

OT23-4

Incidence and Predictors of Onboard Injuries among Sri Lankan Flight Attendants

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Background: The purpose of this study was to estimate the incidence of onboard injury among Sri Lankan flight attendants and to describe the determinants of onboard injury.
Methods: A descriptive cross-sectional study was carried out among Sri Lankan flight attendants. All flight attendants undergoing their annual health and first aid training were invited to participate. Flight attendants who flew continuously for a six-month period prior to data collection were included in the study sample. Recall history of injuries for a period of six months was recorded.
Results: The study sample consisted of 98 (30.4%) male and 224 (69.6%) female flight attendants. Of the total sample, 128 (39.8%) cabin crew members reported an injury in the six months preceding the study. This represents a total injury incidence of 795 per 1000 person years. The leading causes of injury was pulling, pushing or lifting (60.2%). The commonest type of injuries were strains and sprains (52.3%). Turbulence related injuries were reported by 38 (29.7%) flight attendants. The upper limbs (44.5%) and the back (32%) were the commonest sites affected. Female flight attendants had 2.9 times higher risk (95%CI 1.2-7.2) of sustaining and injury than males. Irrespective of sex, body weight less than 56 kilograms (OR 2.9, 95%CI 1.4-5.8) and less than seven years of on board experience (OR 10.5, 95%CI 3.6-31.0) were associated with higher risk of injury.
Conclusions: Work related injury is a major occupational hazard to flight attendants. Appropriate preventive strategies are required to minimize them.

OT23-5

Oxidative Stress Biomarkers Level in Bangladeshi Women Exposed to Inorganic Arsenic through Drinking Water

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Introduction: Arsenic acts as a carcinogen may be due to oxidative stress induction through the generation of reactive oxygen species (ROS).
Methods: To investigate the relationship between urinary arsenic and urinary oxidative stress markers, 8-OHdG and 15-F2t-IsoP were evaluated in arsenic-exposed Bangladeshi residents. One hundred thirteen women from arsenic-exposed area and 115 women from control area were participated.
Measurements: Urinary arsenic was measured by ICP-MS (Agilent 7500ce). Urinary 8-OHdG concentrations were measured by HPLC-ED (EICOM, JAPAN) and 8-isoprostanes were measured by ELISA (Oxford Biomedical Research, Oxford, MI). Results: Urinary arsenic and oxidative stress markers were significantly higher in As-exposed group than control ($p<0.001$). Urinary arsenic was significantly correlated with 8-OHdG ($r= 0.40$; $p<0.001$) and urinary 15-F2t-IsoP ($r= 0.33$; $p < 0.001$).
Conclusion: These results suggested that arsenic-exposure increase oxidative stress in Bangladeshi women.

OT23-6

Data Mining Approach to the Analysis of Risk Factors for Chronic Diseases among Workers

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The prevention of chronic diseases among workers is an increasingly important public health issue in Korea because 25% of the entire population is workers and they are rapidly aging as the entire population is becoming older. Accordingly, workplace health promotion (WHP) is becoming an important approach to improving workers' heath. With the goal of providing information for WHP, this study identified the modifiable (i.e., lifestyle) risk factors for chronic diseases by using data mining method. Risk factors were identified by using logistic regression and a decision tree, which is a data

mining method for predicting risk factors. In addition, the predictive powers for the two methods were compared to demonstrate the effectiveness of data mining in analyzing a large data set. In the analysis, 293,144 workers in 200 workplaces from the 2007 health examination data were analyzed for two chronic diseases: hypertension and diabetes. The results showed that smoking and exercise were important factors influencing these chronic diseases. Specifically, smoking, exercise, and age between 45 and 54 were significant factors for hypertension, while smoking, exercise, and job type (office work or production work) were significant factors for diabetes. In contrast to previous studies, decision tree analysis gave more accurate results than logistic regression in predicting hypertension and diabetes, showing that data mining can be a useful analytic tool for predicting chronic diseases. Further, it provides segment-specific information on risk factors to support WHP for the specific target group.

OT23-7

Water-Related Environmental Health Problems in Bangladesh

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4. BIRDEM, Bangladesh

Background: Bangladesh, a hugely populated, riverine country and the largest delta in the world, is gradually facing tremendous adverse consequences of water-related problems. Objective: This paper aims to articulate the common health problems with evidence and case studies in relation with water. Materials and methods: Ample scientific articles including case studies, newspaper articles, social reports and discussion were reviewed.
Result: Rainfall, high or low, is interlinked with instigation of diseases like malaria, dengue or hepatitis. There are complex relationships with problems of water quality, availability, sanitation, and hygiene. Extreme weather—floods or droughts-- increase the risk. Decrease in water supplies lower the efficiency of local sewerage systems and increase concentration of pathogenic organisms. Diarrheal diseases have two peaks-- pre and post monsoon. Cholera cases are reported mainly in the warmest season. Arsenic is another threatening problem. Floods are the most common natural disaster, specially of 1974, 1988, 1998 and 2004. With climate change, rainfall and sea level rise are expected to increase the frequency and intensity of floods. Flood-related injuries and mental problems are increasing. Other problems includes keratitis, skin diseases and helminthiasis. Besides, poor agriculture, salinity intrusion, drainage congestion, cyclone and storm surge and draught; in turn affecting health. Conclusion: Safe water is in MDGs and a basic human right. Water and sanitation problems needs proper care and support to achieve a sustainable development.

OT23-8

The Blood Lead Concentration and Hemoglobin Level of Gasoline Station Worker in Makassar City, Indonesia

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The study aim to analyze the correlation of blood lead concentration and hemoglobin level. Age, working duration and exposure time, smoking habit, and consuming canned drink are thought as the contributing factors of blood lead concentration. The study was cross sectional study was conducted at 46 gasoline station workers in Makassar. The samples were selected using cluster random sampling. The data were analyzed by using chi square and multiple regression. The results indicate that the average blood lead level (33.7 µg/dl) is still in normal limit, whereas the hemoglobin level (12.9 µg/dl) decreases. The chi square analysis ($p < 0,05$) indicate that there is a correlation between the increase of lead level and decrease of hemoglobin level. Interaction with age (20-39 years), working time (≤ 8 hours/day), working duration (> 1 year), smoking habit 17 (81%) of which the Pb and Hb are abnormal, and habit to consume canned drink 16 (80%) of which the Pb and Hb are abnormal. The multiple regression analysis indicated that working duration and smoking habit have an interaction between lead level and hemoglobin level. It could be concluded that working duration and smoking habit were the highest factors contributing to increased lead concentration and to decreased hemoglobin level of the blood gasoline station workers

OT23-9

How Sand Storms Impact the Environmental and Human Health in Taiwan

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How sand storms impact the environmental and human health in Taiwan Winston Dang(1), Yu Chi Chu(2), Shuenn Chin Chang(2) (1).Taipei Medical University (2).Taiwan EPA* Abstract: Seasonal winds and high-pressure systems are moving dust with air pollutants (Lin et al., 2005), mercury and dioxin from China to Taiwan (approximately 60-70% to Korea and Japan area, 30-40% to Taiwan). With worsening desertification in China and climate change, China's dust storms are increasing in frequency and intensity. Dust storm frequency from China are have increased nine-fold since 1994, once annually in 1994 to nine times per year 2004. On the average, there are four to five dust events and 6.1 dust days in a year in Taiwan (Liu et al., 2006). On April 25, 2009 Taiwan experienced the highest PM10

(Particulate Matters) in the history reached 1000 μg/m3 (Chang, 2009). China's rapid industrial growth has led to steep increases of air pollutant emission. In addition to high increases in the density of PM10 during the dust storms, mercury, copper, sulfur dioxide, sulfates levels have become more prominent in long-range transport of air pollutants. In comparison of daily dioxin level to the day of sand storm, the level has almost double in PCDD/F content (Chi et al., 2008). Chang et al. (2009) indicated that the concentrations of atmospheric PCDD/F and mercury could be as high as 69.8 fg-I-TEQ/m3 and 4.18 ng/m3, respectively, during the Northeast monsoon episode. It reveals that the importance of hazardous atmospheric pollutants concentration via long-range transports in air quality management and health concern. Studies between 2003-2004 (Wu et al., 2007; Wu et al., 2004) indicated that there is also a higher density of fungus in Northern part of Taiwan during sand storms, including Non-sporulating Fungi, Cladosporium, Penicillium, Aspergillus and Curvularia. Some species have been found to only exist when sand storm attacked: such as Botrysporium and Trichothecium. Several studies indicated that the presence of sandstorms may be associated with increased risk of hospital admissions or even increase more respiratory death cases. Exposure to ambient air pollution may be associated with increased risk of respiratory and cardiovascular hospital admissions in Taipei and other regions with similar air pollution episode (Chen et al., 2004, Yang et al., 2005, Chan et al., 2008, Bell et al., 2008). How to prevent the sand storms impact the environmental and human health in Taiwan become a major issue in policy decision process for the Government. *The views expressed in this paper are author's and do not reflect official positions of the Taiwan Environmental Protection Administration.

Oral Track 24- Occupational & Environmental Health

OT24-1

Rising Concerns of Occupational Health in Mongolia: Analysis of Incidence Rates of Occupational Diseases During 1986-2006

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Objective: The industrialization of Mongolia over the last two decades has raised a concern on occupational health. The purpose was to determine the incidence rates and time trends of major occupational diseases in Mongolia.

Method: We retrieved information from all 4598 patients who were diagnosed and registered as having occupational diseases by the National Research Center of Workplace Condition and Occupational Diseases (NRCWOD) in Mongolia during 1976-2005.
Results: The annual incidence rate per million person-years of occupation-related respiratory diseases (ORD) was increased by almost 2 times, musculoskeletal diseases by 5 times, and skin diseases by 4 times during the study period. Pneumoconiosis decreased slightly, but asthma and dust related chronic bronchitis nearly tripled. Although the cumulative incidence rates in workers aged 30-59 years (CIR30-59) of ORD have been decreasing from 8.03% to 2.90% per year in the workers with high-exposures, total numbers of newly developed ORD has increased about 3 times, indicating more people employed in such industries and the need for proactive prevention. Moreover, the incidence rates of ORD for the non-exposed and low-exposed workers also increased.
Conclusion: Numbers of occupational diseases have increased during the last two decades because of expanded employment in industrial sectors. Actions must be taken immediately to allocate more resources for the development of health manpower on early recognition and prevention of occupational diseases, establishment of a comprehensive hazard communication system, and the enforcement of all regulations.

OT24-2

Birth Month, Mold, and Risk of Atopic Dermatitis in Early Infancy

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Background: Several studies have found the association between month of birth and the development of allergic diseases. Knowledge concerning the effect of the interaction between perinatal indoor conditions and seasonality on atopic dermatitis is limited.
Objects: To evaluate the seasonality of atopic dermatitis (AD) in Taiwan and find out the potential lead role of indoor conditions in the effect of seasonality
Methods: 21248 infants born in 2005, who had participated in the Taiwan Birth Cohort Study, were evaluated at 6 months of age by questionnaires completed by their parent or caregivers. Multivariate logistic regressions were used to adjust gestational age, maternal age, gender, parental education, family income, and parental atopic history. Two stage analysis was used to calculate adjusted incidence of AD in each month of birth.
Main Result: Total 1467(6.9%) infants had atopic dermatitis before six months of age. Month-of-births distribution of AD children was significantly different from non-AD references. In AD children, month-of-births distribution of AD children with mold on wall in their house was significantly different from of those living without mold. After adjustment, fall, summer, and winter pose higher risks of AD compared to

spring, with odd ratio 1.45(p<0.001), 1.2(p=0.03), 1.16(p=0.08), accordingly. Compared to spring-summer, fall-winter poses higher risk (OR 1.2, p<0.0001) to get AD.
Conclusions: There exists a seasonal variation of AD risk in Taiwan's infants at 6 months old. Indoor molds contribute to the different distribution of month of births within AD children.

OT24-3

Compliance of Universal Precautions by Emergency Surgical Health Care Workers; A Sri Lankan Experience

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Health care workers in emergency surgical units(ESHCW) are considered as a high risk category of acquiring infections by infectious blood and body fluids. Universal precautions (UP) are recommended to minimize this risk. Objective of this study was to understand the current compliance level of ESHCW with UP and identify factors affect the compliance. First 15 minute management of the first victim in 29 consecutive casualty incidents brought to Teaching Hospital Anuradhapura in 2009 was observed. Total encounters between ESHCW and patients were 359. UP were breached in 1033 occasions with average 2.87 per encounter. Average break rate was 2.91 in doctors. It is 2.78 and 2.93 among nurses and orderlies respectively. The lowest break rate was seen in senior residents and highest in interns. There is a significant reduction in breaking UP with increasing severity of incident (Pearson correlation -0.797, P-0.203) Wearing gloves were seen in 12.81%. Aprons were used by 4.45%. 22.84% of ESHCW remained at bed side without an apparent role. 82.17% attended other victims without hand washing or changing gloves. Compliance of the EHCW with UP remain low in the study population. Increasing the severity of incident reduce the non compliance significantly which is opposite of the general belief. Wearing apron is significantly lower than wearing gloves. Approximately 1/5 of the EHCW remain at bed side unnecessarily. Every 4/5 EHCWs attend other patients without hand washing or changing the gloves which can be a mode of transmitting infections between trauma victims.

OT24-4

Work Life Correlates of Burnout among Nursing Officers Working in Government Teaching Hospitals in Colombo

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Introduction: Burnout, which comprises a syndrome of emotional exhaustion, depersonalization and a sense of low personal accomplishment is an important negative outcome of chronic occupational stress. Information on correlates of burnout among Sri Lankan nursing officers (NO) is vital to initiate preventive measures.
Objectives: To describe work life correlates of burnout among NOs working in teaching hospitals in Colombo.
Methodology: A descriptive cross sectional study was conducted in six teaching hospitals in Colombo among a stratified cluster sample of 1356 nurses. A self-administered questionnaire with questions assessing work life correlates (identified through a literature survey and key-informant interviews) and validated Sinhala version of Maslach Burnout Inventory–Human Services Survey (MBI-HSS) was used. Burnout status was determined using validated cut off values for the total score of MBI-HSS.
Results: Response rate was 90.4% (n=1356) and prevalence of burnout was 27.9%. In multivariate analysis, work life correlates explained 42.6% of variance of burnout. Shorter nursing experience of <5yrs (OR=5.6), high work demands (OR-2.6), low work resources(OR=2.4), poor physical work environment (OR=1.7), low work satisfaction (OR=2.2), working in paediatric units (OR=3.1), working in OPDs/other units (OR=0.3), shiftwork (OR=2.1) and difficulty with shiftwork (OR=5.1) were significant predictors of burnout.
Conclusions: Several correlates in the NOs' worklife contribute to burnout and minimizing these could be an important strategy in prevention.

OT24-5

Relationship between Drinking Water and Blood Arsenic Level and Skin Lesions in Buyat Village North Sulawesi Indonesia

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Arsenic contamination of groundwater is a severe public health crisis in Buyat Village Kotabunan Sub-district, Bolaang Mangondow Regency, North Sulawesi Province Indonesia, where the population is exposed to arsenic in drinking water through tube wells used for groundwater collection. In this study, explored the relationship between drinking water and blood arsenic levels with skin lesions on Buyat Communities. The research used of baseline data from subject 108, which as 54 case and 54 control who were recruited into the Health Effects (Skin lesions such as Keratosis, and hyperkeratosis). This study was Case control study on the health effects of arsenic exposure from drinking water in Buyat Village. We conducted analyses with Chi-Square and Odd Ratio. We found a strong dose–response association with all measures of arsenic exposure in drinking water and skin lesions. Arsenic levels in drinking water from tube well

of Buyat Village was about 0.01-0.104 mg/L (average 0.056 mg/L). A significance was observed between in drinking water and blood arsenic levels with p=0,000 (Odd Ratio = 19.44 95% CI: 6.52-58,00), blood arsenic levels and skin lesions with p=0.000 (Odd Ratio = 15,63, 95% CI: 4,94-49,40). Our study provides insight into potentially modifiable host characteristics and identifies factors that may effectively target susceptible population subgroups for appropriate interventions.

OT24-6

Development of Wet & Bulb Globe Temperture (WBGT) Index Formula and Determination of Heat Strain Indicator for Worker Exposed by Heat Stress

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The objectives of the research were to determine heat strain indicator other than core temperature and to discover mathematical formula which could develop new indicator of WBGT Index and threshold limit value being appropriate for workers in Indonesia.The research was conducted in glass, steel, and home industries whose sample size were 122 workers. Workers who experienced heat strain were 26 persons (21.3%). Analysis showed that beside core temperature, pulse could be used as an indicator of heat strain. Its critical point was 7 pulses/minute if baseline pulse was known, and critical point was 105 pulses/minute. Based on confirmatory analysis, mathematical formula for WBGT index was got. The formula was (0.32 x wet temperature) + (0.37 x dry temperature) + (0.31 x globe temperature). Based on regression analysis was derived threshold limit value of developed WBGT index was 37.1°C. However, the value of former WBGT index was 33.3°C. If wind velocity was

OT24-7

Arsenic Levels Exposure as Risk Factors to Skin Lesions at Peoples in North Sulawesi, Indonesia

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Arsenic exposure can generate various skin lesions such as keratosis, hyperkeratosis, hyperpigmentation, hypopigmentation, and skin cancer. This study was intended to examine risk factors of rice, drinking water, urinary, and blood arsenic levels to skin lesions at peoples in North Sulawesi. This was a case control study whereas cases (n=54) were people suffering for skin lesion (keratosis or hyperkeratosis) living in Buyat Village (exposure areas) and controls (n=54) were normal people who were living in Buku Village (non exposure areas). Inclusion criteria was age more than 10 years and living at the areas more than 7 years. Arsenic levels was analyzed using AAS-GF while skin lesion diagnosed by a dermatologist. Data analysis was performed using logistic regression. There was significant difference before groups for age, sex, education and occupation p>0.05. In the others, there were significant differences between case and control groups for arsenic levels in rice (0.61±0.27 vs. 0.34±0.12 mg/l, p=0.00), drinking water (0.04±0.03 vs. 0.01±0.01 mg/l, p=0.00), urine (0.13±0.15 vs. 0.00±0.01 mg/l, p=0.00) and blood (0.99±0.08 vs. 0.02±0.03 mg/l, p=0.00). Analyses with logistic regression showed that arsenic levels in rice, drinking water, urine and blood associated with skin lesions, respectively OR=4,14, (95%CI.,1.18-14.51), OR=36.79 (95% CI., 10.44-129.66), OR=5.94 (95%CI., 1.6-21.53), and OR=10.53 (95%CI., 2.66-41.75). We conclude that arsenic levels in rice, drinking water, urinary and blood were risk factors to skin lesions.

Oral Track 25- Occupational & Environmental Health

OT25-1

Associated Sociodemographic and Employment Characteristics with Return to Work Following Injury

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Background: Return to work following injury is an important end result of treatment and rehabilitation among workers who are injured. Apart from the nature of injury, other factors such as employment characteristics, social and demographic factors were found to affect return to work.
Aim: To determine the prevalence and factors associated with return to work among patients following long bone fractures of the lower limbs
Method: A cohort of patients who sustained long bone fracture of the lower limbs during the period of 24 months – 1st August 2004 to 31st July 2006 was identified from a teaching hospital in Kuala Lumpur . Subjects were identified through medical record registry and eligible patients were then contacted by phone. Subjects were followed up at 3,6,9 and 12 months post injury and stopped if a patient had returned to work or if 12 months had past since the onset of injury. Results: One hundred eighty and five (185) subjects were recruited. Of these 166 (89%) had returned to work within one year. Return to work period was found to be significantly associated with gender, type of occupation and presence of compensation.
Conclusion: Return to work is associated with factors other than the injury itself, such as compensation issues, occupation type and gender. Looking at these factors may improve communication between caregiver, employer and patients to encourage safe earlier return to work for the benefit of all.

OT25-2

The Relationship between Occupational Stressors and Psychopathology of Fire Fighters in East Jakarta

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Objectives: Fire fighters are human resources that often confronted with many problems which is called occupational stressors. The aim of this research was to find out the relationship between occupational stressors and psychopathology of fire fighters in East Jakarta.
Methods: This was an analytical survey with a cross sectional design.
Results: Stressors of fire fighters were dominated by qualitative overload and job responsibility. Prevalence of psychopathology on fire fighters was 29.7%. There was significant relationships between subject characteristics and lifestyle with psychopathology (OR=3.36 8.69). A significant relationship between occupational stressors with psychopathology was also found in this study (OR=2.70 16.45). By multivariate analysis, responsibility stressor was the only occupational stress which has significant relationship to psychopathology.
Conclusion: We conclude that occupational stressors associate with psychopathology of fire fighters in East Jakarta. Local government should provide appropriate support such as recreation facility.

OT25-3

Development of An Infectious Risk Assessment Model under Continued Exposure: A Case Study with Shigellosis

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Microbial risk assessment is an emerging tool for predicting risk of infection to specific pathogen. Various models have been proposed to evaluate risk of infection under different exposure scenarios, namely the "single-exposure" and "continued exposure" models. Typical single-exposure models include the Exponential model and the Beta-Poisson model, and the risk of infection depends on the type of pathogen and the amount of pathogen that people are effectively exposed to. For continued exposure, the negative binomial model is commonly used. By assuming a constant infection probability, cumulative risk estimate may be constructed over time, but the results often would not match epidemiological records. In this study, outbreaks of shigellosis were used as an example to derive risk models for continued exposure conditions. An initial risk of infection was estimated from single-exposure data, and the negative binomial model was modified and fitted to the cumulative case data from outbreak reports to estimate the daily infection risk over time. The results showed that, without considering the exposure dose, the risk of shigellosis infection from single exposure was between 0.0615 and 0.0688. During a shigellosis outbreak, the daily infection risk increased exponentially over time. The daily risk of infectionn differed by major route of contact, with direct contact with pathogen yielding higher risk of infection than through contaminated food or water. Further application of the model on predicting infection risks are warranted.

OT25-4

Bagasse Dust Exposure to Pulmonary Function Impairment of Bagasse Stored Workers in Sugar Industry, Thailand

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To determine bagasse dust exposure and some factors which were related to pulmonary function impairment of 39 bagasse storage workers in Khon Kaen, Thailand from May 2006 to February 2007. Five manufacturing processes, including dumping, shredder, quality analysis room, boiler, and bagasse storage operation, were involved. Spirometer test, IOM sampler, cyclone sampler, and a self-administered questionnaire were developed. The average of bagasses dust concentration in all areas and types of dust was not over Thai legal limits, ACGIH recommend and OSHA standard for nuisance dust. Pulmonary function test revealed that 6 cases were moderate and 3 cases were mild restrictive patterns. A total of 9 cases (23.68 %) had abnormal pulmonary function. For all type of dust, there was no statistically significant relationship between level of bagasse dust concentration and pulmonary function impairment (p-value>0.05) including among age, working duration, mask usage and abnormal pulmonary function (p-value = 0.05).

OT25-5

Aerial Lead Level, Blood Lead Level and Their Health Effect and IQ of the Students

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The main objective of the current research was to analyze a difference in blood lead levels and their impact on the health and IQ among the fifth-grade students of Banyuajuh 5 and Kamal 1 in Bangkalan , Madura. The study was an analytical-observational study carried out using cross-sectional design among the fifth-grade students of Kamal 1 and Banyuajuh 5.The study was conducted in Kamal Sub-district Madura. The population of the study included the fifth-grade students of Kamal 1 and Banyuajuah 5 Kamal. The results of the current study showed blood lead levels of the fifth-grade students in Banyuajuh 5 averaged at 2,5907 µg/100 ml and those in Kamal 1 averaged at 3,6142 µg/100 ml. Some health problems experienced by those students were generally the reduced haemoglobin level, headache, decreased memory, difficulty in concentration, constipation and lower IQ. Two-tailed t test showed p

value at 0,000, suggesting that there was significant difference in the blood lead levels among the fifth-grade students in Kamal 1 and Banyuajuh 5 and there was a substantial effect of the blood lead level on haemoglobin level, IQ, and personal hygiene. It is recommended that : (1) the lead exposure among the students should be reduced by growing the green trees in the school yard and (2) routine monitoring of the blood lead levels among the students; and (3) the students with blood lead level ≥10 µg/100 ml should undergo screening and monitoring until their blood lead levels drop to below 10 µg/100 ml.

OT25-6

Characteristics of Working Environment Contaminated by Biomass Burning Smoke and Assessment of Worker's Exposure

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The workplace and personal air samples were taken from the factories producing ribbed rubber smoked sheet (RSS) in Thailand, which are heavily contaminated by wood burning smoke, during January 2006 – February 2009. The purpose was to clarify particles and particle-bound PAHs concentration in particles with various size diameters, especially, ultrafine particles which were sampled by the new nano-personal air samplers. Urinary l-hydroxypyrene was used to explain the correlation of the worker's exposure to PAHs in ultrafine particles. RSS amount, seasons, wind direction, and precipitation were related to particles and PAHs concentrations but the roof turbines were not. The average particle concentrations in the workplace and in the worker's breathing zone were lower than occupational standards, e.g. 10 mg/m3. However, PAHs concentrations were rather high in the workplace (94.6 ~ 131 ng/m3) and in the breathing zone (153 ng/m3). 18% of the PAHs in the workplace were in PM0.43 while the workers were exposed to high PAH concentration in PM0.2. PAH compounds in PM0.2 in the breathing zone showed better correlation with l-hydroxypyrene levels than PM10. Therefore, RSS workers who were exposed to a high PAH concentration during working and living period have a higher risk to occure future health problems.

OT25-7

The Problems of Working in Infectious Waste Transportation from Hospital by Private Transport Sector of Thailand

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4. Chulalongkorn University, Thailand
5. Sukhothai Thummathirat Open University, Thailand

Background : The infectious waste(IW) trend to be increasing in quantity and variety. The environment concern and to protect of local residents and high cost of disposal, and there were the increasing number of hospitals which had the other organization manage the disposal outside by Private Transport Sector (PTS).
Objective: To determined the problems of workers who work with the IW transportation.
Results: there were 127 workers from 12 PTSs 86.6% of workers were male, mean age of 31 years old, and the mean of working were 5.03 years. The main work were collector of 57.5%, drivers of 26%, both driver and collector of 16.5%. The mean driving time of 8 hr a day (min:max= 2:24 hrs). 61.1% of the driver have had rotated every 4 hr. Only 38.6% was trained. The worker had an accident\injury from IW during working 42.5%, 37.8% have had contaminated with the IW, 18.9 % had traffic accident. 27.6 % immediately control the infectious when the IW was contaminated with the environment, 18.1% the vehicle have control the temperature of 100C or lower in the container. Only 11.0% the PST have indicated the rest area.
Conclusion: The problem of IW transportation by PTS were health risk, environmental risk, the equipment risk, community risk. The IW management which organized by PTS need to development for better system and quality control in the future.

OT25-8

The Investigation of Sanitation Condition and Vocs (Volatile Organic Compounds) Emitted from the Automobile Garages Located in Bangkok, Thailand

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This research aimed to investigate the concentrations of concerned volatile organic compounds and the sanitation condition of automobile garages located in Bangkok, Thailand. The background of this study was the complaints of public nuisance from the residence who living nearby the garages. The 200 garages were investigated. The methodology of this study was categorized into two parts namely; (i) sanitation investigation by using questionnaire and observation form (ii) the measurement of concerned VOCs at the garage site and nearby communities. The results indicated that the sanitation in the garage was moderate level. The main problems were wastewater, air pollution particularly volatile organic compound and dust, and noise pollution. Many workers ignored to wear the personnel protective equipment during their operational working. Seven percent of the studied garages were

complained and the main problems were air pollution (86.6%). The concentrations of Benzene, Toluene, Xylene and Ethylbenzene in the nearby communities were in the ranges of <0.001-1.097ppm, <0.001-1.182 ppm, <0.001-2.388 ppm และ <0.001-0.045 ppm, respectively. The concentrations of concerned VOCs in the nearby communities (within 10 meters) were related to the concentrations of VOCs in the garages with the correlation coefficients of 0.64, 0.49, 0.40, and 0.22 for Toluene, Benzene, Xylene and Ethlybenzene, respectively. The concentrations measured in the nearby communities were compared to the ordor threshold limit, the results indicated that all concentrations were not exceeded the order threshold. However, there were many factors related to the measured VOCs concentration.

Oral Track 26- Occupational & Environmental Health

OT26-1

Association between Arsenic Level in Drinking Water with Skin Disorders in Buyat Village North Sulawesi Indonesia

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Objectives: Arsenic contamination of groundwater is a severe public health crisis in Buyat Village Kotabunan Sub-district, Bolaang Mangondow Regency, North Sulawesi Province Indonesia, where the population is exposed to arsenic in drinking water through tube wells used for groundwater collection. In this study, we explored the association between Arsenic levels in drinking water with skin disorders on Buyat Communities.
Methods: We used baseline data from subject 86, which as 43 case and 43 control who were recruited into the Health Effects (Skin disorders). This study was Case control study on the health effects of arsenic exposure from drinking water in Buyat Village. We conducted analyses with Chi-Square and Odd Ratio.
Results: We found a strong dose–response association with all measures of arsenic exposure in drinking water and skin lesions. Arsenic levels in drinking water from tube well of Buyat Village was about 0.01-0.10 mg/L (average 0.056 mg/L). A significance was observed between Arsenic levels in drinking water and skin disorders with p=0.017 (Odd Ratio = 2,87, 95% CI: 1.194-6.934).
Conclusions: Our study provides insight into potentially modifiable host characteristics and identifies factors that may effectively target susceptible population subgroups for appropriate interventions.

OT26-2

Special Subject of Assessing the Environmental Burden of Disease and Economic Lost in Vietnam in 2008

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Vietnam is one of developing countries in Asia area that be worst sustainable development of environment because of rapid process of urbanization and industrialization. This special subject is in framework of project named "Investigating, statistic and assessing the effect of polluted environment on community health and proposing solutions aim to reduce pollution and recommend to public in 2008" by the Vietnam Environment Administration. Materials and methods: Using industrial pollution projection system (IPPS) developed by the World Bank, method of assessing the Environmental Burden of Disease (EBD) and economic lost caused by polluted environment developed by WHO. Results: The indicator of EBD from unsafe water, sanitaion and hygiene in provinces in the Mekong River Delta and South East area is higher than the others, while result of assessing the EBD from indoor air pollution in North East area is highest in nationwide. In 2007, on averaged 1000 people in North East, it would be losted 20 years of healthy life due to premature mortality and time lived in states of less than full health caused by indoor air pollution, is double the whole country average. The EBD indicator from developed industrialization provinces such as HaTay, HaiPhong, DongNai, BinhDuong, DaNang... is hiher than from underdeveloped provinces. An outstanding point is although the EBD indicator from unsafe water, sanitaion and hygiene make up very limited percentage of total EBD from three polluted environment factors (approximately 1%), the economic lost caused by them is quite high percentage, about 46% of total lost of nation.

OT26-3

Stress and Satisfaction among Healthcare Professionals: A Survey Finding

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This cross-sectional postal survey examined stress among doctors in a teaching hospital at the University of Malaya Medical Center, Kuala Lumpur, Malaysia. The Pressure Management Indicator (PMI) was utilized in the study. This 120-item self-report questionnaire measures job satisfaction, mental and physical health, pressure, individual differences, coping, and social support based on a 6-point Likert scale. The higher the score, the higher the satisfaction or stress. Some 220 (47.3% response rate) doctors participated, consisting of 36 consultants (16.4%), 41 lecturers and trainees (18.6%), 90 medical officers (41%), and 53 house officers (24%). Significant differences were shown between the various groups in terms of job satisfaction (p=0.001),

organization commitment (p=0.001), state of mind (p<0.001), resilience (p=0.031), confidence level (p<0.001), physical symptoms (p<0.001), energy levels (p<0.001), workload (p<0.001), relationship (p=0.006), personal responsibility (p<0.001), home-work balance (p=0.017), type A drive (p<0.001) and life-work balance (p=0.019). Lecturers were significantly more satisfied in their job than medical officers (p=0.019) and house officers (p=0.027). Consultants were more committed than medical officers (p=0.029) and house officers (p=0.004), and had a better state of mind than the other three groups. House officers had the poorest state of mind and were least satisfied. Working relationships problems, heavy workload and home-work imbalance were the main sources of stress. This study concluded that early career doctors were most stress and least satisfied and thus steps need to be taken to mitigate these stresses in order for doctors to provide a better quality of care to patients.

OT26-4

Pb-Air and Its Correlation with Concentration of Pb-Blood in Surabaya Street Children

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The greatest source of lead pollution is from exhaust gas transportation mode, especially emission which come from internal combustion engine exhaust gas, that use gasoline, which contains of Lead. Many researches found the evidence for Pb exposure are more than 10 µg/dl are very dangerous for children and can cause brain damage, kidney, bone marrow, and other children organ damage. The objective of this research was to make a model of Pb-Air and its correlation with concentration of Pb-Blood in street children in Surabaya. This was an observational study with cross-sectional study approach. This research was brought in 6 locations. The research sample were street children that took by inclusion criteria, such as: 5-12 years old with time exposure 5 hours/day. Data about respondent characteristic were collected through interview guided by questionnaire, took street children blood for laboratory essay using leadcare test, also air sample using High Volume Sampler (HVS) for laboratory essay to know the concentration of Pb-Air. Data were analyze using descriptive and analytical method by tabulation and linier regression ($\alpha = 0.05$). The result of this research and laboratory essay showed that average traffic volume in Siola crossroad, Ambengan crossroad, Banyu Urip crossroad, front of Joyoboyo terminal more than 2400 smp/hour, such locations categorized as crowded traffic volume. Pb-Air concentration in front of JMP shops was 0,553 µg/m3, Siola crossroad was 0,46 µg/m3, Ambengan crossroad was 0,293 µg/m3, Banyu urip crossroad was 0,452 µg/m3, Adityawarman crossroad was 0,405 µg/m3, and in front of Joyoboyo terminal was 0,437 µg/m3. Mostly, the Pb-blood concentration in street children (67%) less than normal concentration (< 10 µg/dl). The highest was 19,6 µg/dl. According to linier regression test, the model of Pb-air and its correlation with Pb-blood in street children in Surabaya was y = 8,658 – 9920,059 X1 + 10390,817 X2. Where X1 expressed concentration of Pb-air at noon (µg/m3), X2 expressed concentration of Pb-air at night (µg/m3), and y expressed concentration of Pb-blood in street children (µg/dl).

OT26-5

Indoor Acanthamoeba as Potential Pathogens of Building Related Illnesses

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Microbes in the indoor environment can be aetiological agents for building related illnesses (BRIs). Since 1995, Acanthamoeba has been reported to cause keratitis, granulomatous amoebic encephalitis, and other pathological lesions in Malaysia. The roles of Acanthamoeba as pathogens and as vectors for infections caused by their endosymbiotic microorganisms are being studied. We studied the pathogenic potential of indoor isolates of Acanthamoeba based on culture, morphological, molecular and experimental infection characteristics. Primary isolates of Acanthamoeba from dust samples of air-conditioners were obtained. Selected environmental isolates were axenised. Established axenic Acanthamoeba isolates were determined for their clonality using PCR and sequencing. Pure-cloned isolates were characterised morphologically and molecularly. Five species were identified according to morphological criteria as A. castellanii, A. culbertsoni, A. griffini, A. lenticulata, and A. polyphaga. These were placed in the T3, T4 and T5 genotypes on molecular characterisation. Two clinical isolates and other environmental isolates were placed into T4 genotype. Species identities for some isolates could not be determined morphologically. Many isolates were predicted as potentially pathogenic based on PCR analysis, temperature tolerance and osmotic tolerance tests. The pathogenic potential of isolates was further confirmed by their ability to cause glial cell death in in vitro cytopathogenic assays and pathological lesions in experimentally infected Balb/c mice. Electron microscopy showed that physical contact of Acanthamoeba trophozoites to glial cells could trigger apoptosis and necrosis of glial cell. The potential role of Acanthamoeba as causative agents in building related illnesses is discussed in the light of these findings.

OT26-6

Job Strain and Associated Factors for Occupation Stress among Teachers in Kuala Lumpur, Malaysia

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Objective: Stress has become a global phenomenon with the advancement of knowledge and technology and teachers are no exception to this condition. This paper determined the prevalence and associated factors among school teachers in a cosmopolitan city.
Method: This was a cross-sectional study undertaken using the Karasek Job Content Questionnaire. A cluster sampling was used to sample a total of seven schools from a total of 35 morning session schools in the city of Kuala Lumpur. The study was conducted between June 2007 and July 2008. Data was collected using a validated dual version (English and Bahasa Malaysia) self administrated Job Content Questionnaire. The findings were analysed using SPSS version15.
Results: Three hundred and twenty respondents (64.1%) participated in the study. The mean age of the teachers was 36 years, 83.4% were females and 78.5 being of the Malay ethnicity. The study showed that 20.2% of the subjects identified themselves in the high strain group, 21.3% in the active group, 43.8% in the passive groupand 23.7% in the low strain group. The high strain group of subjects were found to be significantly associated with Malay ethnicity (OR = 3.46, 95%CI = 1.13, 10.67), teaching duration of 5 to10years (OR = 2.51, 95%CI = 1.23,5.12) and presence of supervisor support (OR = 0.37, 95%CI = 0.16, 0.83).
Conclusion: Stress management strategies at the school should be focused on supervisory support and younger teachers.

OT26-7

Food and Beverages Merchant Sanitation in Indonesia

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Food bacteriological quality is related with preparation of food sanitation which will affect our health. It can be seen from the presence of E. coli bacteria. There are many food-stall in school and around it do not fulfill basic hygiene and sanitation standard. The objective of this study was to explain about condition of food preparing, coconut ice beverages sanitation and bacteria's quality of them. This was an observational-descriptive study with cross sectional approach. The result was majority food-stall have good condition of hygiene sanitation food prepared and all of them prepared food which was no E. coli bacteria but the coconut ice beverages hygiene and sanitation in Surabaya just only 40% up to the health standard, and all of them (ie. coconut ice beverages, coconut water, sugar water, and ice water) were found positively E. coli bacteria. The suggestion for relevant or related institution is to do an observation, counseling, monitoring and training about foods and beverages merchant hygiene and sanitation to improve their hygiene and sanitation.

OT26-8

Hazard Analysis Critical Control Point in Milk Home Industry

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Variables that be searched including temperature and heating time, total of bacteria (MPN Coliform), sensoric aspects (smell, colour, flavor) hygiene and sanitation aspect of milk processing (coral sanitation, health and cleanliness of the cow, personal hygiene, plate, equipment and package sanitation, sanitation of processing and packing place and distribution basin). Accumulation technique of the data uses observation method, interview, survey and testing in the laboratory. Next the data will be analyzed descriptively using table and be explained naratively. Research result indicates that milk appear very potential of hazard such as physically, chemically and biologically hazards. Be found 11 CCP that succeed to identified. Critical limit is consisted from every critical parameter including variables above. Monitoring result indicates that several parameters proved abuse critical limit that been consisted, for example temperature using and heating time that too high and practice of hygiene sanitation is still badly. Verification has done to enactive that the process has walked congruent with HACCP design. Documentation has accommodated all of activity HACCP from begin until the end. Conclusion from this research is the HACCP principles proved it can be applied in all kind of meal processing to household scale. But it needs commitment from entire side that competent in order to apply HACCP to produce food product that real safe.

OT26-9

Compliance of Infection Control Protocol among Dentists in Trivandrum City, Kerala

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BACKGROUND Dentists are at a risk of transmitting infectious diseases in a dental setting, which may be transferred from the patient to dentist, dentist to patient or from patient to patient. There is risk of transmission of infectious agents via cross contamination through dental procedures. OBJECTIVES To assess the compliance to infection control protocol and assess the knowledge of infectious diseases among dentists in Trivandrum city. METHODOLOGY A descriptive cross sectional study

was carried out among the dentists in Trivandrum city. One hundred and seventy four dentists (males 56.7 percent)were given self-administered questionnaires. Analysis was done using SPSS version 14. RESULTS None of the respondents had 100 percent compliance with all infection control procedure. The mean score of compliance was 84.7/115 Mean score of knowledge of infectious diseases was 23.7/30. 93 percent compliance with standard protocol was the maximum reported (2 dentists). Experience of more than 30 yrs and presence of a dental assistant was significantly associated with higher compliance to infection control protocol. Being a dental college faculty, working in the private sector and awareness of standard protocol were significantly associated with Knowledge of infectious diseases. Compliance was positively correlated to knowledge. CONCLUSION One hundred percent compliance with infection control protocol was not of the dentists in Trivandrum city. It is imperative from the study that dentists require more training and continuing dental education in infection control.

Oral Track 27- Safe Community

OT27-1

Does Hospitals' Neighbors Affect Their Willing to Join Quality Indicator Project?

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The purposes of this study were to examine the relationship between hospitals' neighbors with hospitals neighborhood effect and hospital's willing to join quality indicator project. A total of 238 hospitals registered in Taipei and Kao-Ping branch of BNHI, were recruited in this study. The dependent variable is whether hospital chooses to join the Taiwan Healthcare Indicator Series. By employing GIS, we calculated distance-based density index for each hospital within with 1,5,10km radius, respectively. Hospital data in 2005 from DOH including discharge and the number of physicians were as control variables. The logistic regression and Hosmer and Lemeshow Goodness-of-Fit Test were used. The county-level and town-level Herfindahl-Hirschman Index (HHI) were calculated to compare the different definition of neighborhood effect. In the baseline model with controls, discharge and physician number were included in the model, the Hosmer and Lemeshow Goodness-of-Fit test showed a fairly good fit. We further entered county-level and town-level HHI, and the Goodness-of-Fit test showed insignificant improvement. However, after the distance-based density index were entered into the model respectively. The model showed great improvement at the distance-based density index at 10 KM. HHI is an index of market competition. It implies that social processing of market information between socially equivalents is a factor motivating hospital behaviors. However, the findings show that hospitals may react to their surrounding neighbors to whom they are not necessarily socially equivalent. The structural feature of market environment is also an important factor for understanding hospital behaviors.

OT27-2

Effects of Intervention on the Quality of Life of the Elders in Rural and Urban Areas of Zhejiang Province of China

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Population aging has been a concern of health care policy makers and providers when China was considered to be an aging society in 1999, and Zhejiang Province ranked the second of the aging degree in 2000. In view of this, we conducted a prospective individualized health intervention study based on a multistage cluster sample of 4995 elderly people aged 60 years and over in Zhejiang Province of China with 2441 in rural area and 2554 in urban area, respectively, after a cross-sectional study. The SF-36 was used as an instrument of assessment.
After 9-month intervention on community and individual levels, the awareness rate of chronic diseases increased, behaviors adverse to the health were amended partially, such as the brined vegetable intake and salt intake decreased and smoking abated ($p < .001$) while fresh vegetable and fresh fruit intake increased in the intervention group ($p < .01$) after adjusting for socio-demographic characteristics. The intervention group in rural area also improved significantly in RP, RE, MH, and mental component summary scale scores ($p < .05$) after adjusting for socio-demographic characteristics, health behaviors, and chronic disease status. But, the similar results did not be found in urban area.
In conclusion, individualized health intervention based on the face-to-face interview depending on the doctors in charge in community is feasible to change the health behaviors and improve the quality of life in elderly population in Zhejiang Province of China, especially in the rural area.

OT27-3

Lesson Learned: Health Impacts of Thachin River Dredging and Its Canal Improvement Project in Thachin Basin, Thailand

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Flooding of Thachin basin resulted in problems such as damages or water-borne diseases. The Royal Irrigation Department, Ministry of Agriculture and Cooperatives has proposed the dredging of shallow Thachin River and the improvement of two shortcut canals to accelerate the drainage capacity of the river. Health impact assessment

was conducted to investigate possible impacts in communities relevant to the project. Impacts on four health dimensions ; physical, mental, socio-environment, and spiritual health was investigated. Data were collected by using the questionnaires and the focus group method. Several significant impacts were observed. Firstly, the accumulated pesticides from agricultural practices in sediment and the diseases from illegal labors would occur and have impact to communities during construction period. Secondly, community did worry about the construction of canal water gate, leading to the inconvenience of the routine waterway use. The ineffective management of the gate would lead to unable water use due to the accumulated toxic pesticides at the gate. Thirdly, no impacts to culture and custom of the communities were observed, however the noisy dredging machine and the water turbidity from construction would affect to the inhabitant. Finally, this project encouraged people to more involvement and attachment to their community in terms of environmental values and benefits. The results suggest that the impacts of the project be awared and appropriate health mitigation plan for the negative impacts be implemented. The establishment of health surveillance group in their community is also needed for monitoring of project and subsequent community health.

OT27-4

Safe Home Program Using Health Collaborators and Home Visits, Da Nang, Viet Nam

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The Safe Danang project is a province wide research and intervention project intended to implement a comprehensive, sustainable and effective child injury prevention program, it covered 2 years in the central city of Danang (population 818,142). Safe home became a central focus of the project. The program uses multiple-strategies including local collaborators making home visits and hazard checks. It had 2 objectives: (i) to reduce child injury risk factors in and around house, and (ii) to pilot different mechanisms of achieving this effect for evaluation. The program includes two target groups: the children under six years old and their parents or caregivers. Collaborators from the local commune visit all households in areas which have children under six. A series of visits are intended to identify and eliminate child injury risk factors as well as directly counsel in household by using Safe Home Checklist, Safety Calendar and Guideline for child injury. After five months of the piloting model and program implementation, the 1st round was completed with 1,500 households being visited and counseled in 2 communes of the Thanh Khe district, the target area for intervention. The next step involves intervention being extended into the whole Thanh Khe with 10.000 households and the wider community in 6 other districts of Danang. The evaluation process and surveillance system are embedded in the program. There is much community involvement and interest in the program. Practical matters and analysis of data have helped focus the program and target the effort

OT27-5

District's Availability of Exercise Facility and Metabolic Syndrome in Northern Taiwan: A Multilevel Analysis

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Background: This study examines, using a multilevel analysis, the relationship between the availability of an exercise facility in the community and the prevalence of metabolic syndrome in northern Taiwan.
Methods: Among the 23921 participants in an adult health check-up program in Taoyuan County during 2004 and 2005, 14658 individuals aged 40 years or older from 10 districts agreed to donate their leftover blood sample and grant permission to access the information from their physical examinations, self-reported questionnaires, and blood chemistry results. The availability of exercise facilities in the district was established using the number of facilities per 10000 residents and then categorized into four levels. Multilevel logistic regression models were created to examine the effect on metabolic syndrome at both the individual and the contextual level using MLwiN software version 2.0.
Results: The addition of the contextual variable to the model that included individual characteristics led to a further reduction of 19.1% in the variance. Using exercise facility density level I as the reference, the odds ratios of metabolic syndrome for levels II, III, and IV were 0.88, 0.85, and 0.76, respectively, with the trend test reaching significance. The protective effect of residing in an area with a higher level of exercise facility density was stronger for residents without a regular exercise routine than for those who exercised regularly.
Conclusions: Greater availability of exercise facilities in a district was associated with a lower prevalence of metabolic syndrome among its residents. These findings have important implications for the prevention of the illness.

OT27-6

Research on Respondent Satisfaction on Hospitalization Care in the North Sumatera Province' Indonesia

Yaslis Ilyas

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Backgraund: Problem of quality and satisfaction of patient relate to the health services are concerned not only to the patients but also to the family, community, provider and the government. The trend of dissatisfaction of the consumers to the health services are getting worse.
Method: The design of this research is a survey. Resource of this research is secondary data. Data were driven the Health Base Research 2007 of Center of Research and Development, Deparment of Health, Republic of Indonesia.
Results: the research find that 20% of the respondent perceive the hospitalization care is bad and 77% of respondent perceive is good. The level of unsatisfaction on the hospitalization care is alarming; that is why many the rich group people are not buying the hospitalization care from the hospitals in North Sumatera. Many of them are buying the overseas hospitalization care. Based on quantitative analyses we find there are strong correlation between factor the type of hospital, cost of health care, and the payer relate to the satisfaction of hospitalization care ($P<0.05$).
Conclusions: The trend of increasing the unsatisfied on the hospitalization care is alarming. It is needed the development and training in the service excellence for staff medical and administrative services of hospital in the North Sumatera Province.

OT27-7

Factors Associated to Patient and Health Care System Delays in Tuberculosis Diagnosis in Thaibinh Province, Vietnam

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Delay in tuberculosis diagnosis would lead to extend infectious period of tuberculosis (TB) patients, increase risk of TB transmission and mortality rate. This study aimed to assess delay in TB diagnosis among new smear positive (NSP) pulmonary TB patients in Thaibinh province and to identify risk factors of TB diagnosis delay. A cross-sectional study was conducted in Thaibinh during 1st to 20th February 2009. A total of 198 new smear positive TB patients who registered treatment under TB control program in the fourth quarter of 2008 onward were interviewed by structured questionnaire. Median (range) patient delay was 17 days (0-251), health care system delay was 13 days (0-240) and for diagnosis delay it was 40 days (2-285). Risk factors for patient delay (>17 days) were single status, no religion and poor knowledge on cause and transmission of TB. The important factors associated with health care system delay (>13 days) were private health sector or communal health post as the first visit. Overall diagnosis delay (>40 days) were associated with middle and elderly age groups, living in rural, low education, being farmer, non-smoke, poor TB knowledge, particularly on cause and transmission of TB. Health education strategies needed to conduct for targeted groups to raise TB awareness. For enhancing quality of health care services at peripheral level, building capacity of communal health workers were required to carry out. In addition, development of referral system between private and public health sectors could help TB program in early detection and diagnosis of TB.

OT27-8

The Relationship between Surgeon Volume and Hospitalization Costs for Patients with Oral Cancer: A Nationwide Population-Based Study in Taiwan

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Background: Oral cancer leads to considerable health care use. Wide resection of tumor and reconstruction with pedicle flap/ free flap is widely used. This study was conducted to explore the relationship between hospitalization costs and surgeon case volume.
Methods: This study uses data for the years 2005 to 2006 obtained from the National Health Insurance Research Database published in the Taiwanese National Health Research Institute. From a population-based data covering the years 2005 to 2006, the authors selected a total of 2663 oral cancer patients who underwent resection of tumor and reconstruction from the Taiwan National Health Insurance Research Database. Case volume relationships were based on the following criteria; low-, medium-, high-, very high-volume surgeons were defined by $\leqq 9$, 10-29, 30-55, $\geqq 56$ resections with reconstruction, respectively. Hierarchical linear regression analysis was subsequently performed to explore the relationship between surgeon case volume and hospitalization costs and days.
Results: The mean hospitalization costs among the 2663 patients were $ 9528 (all costs are given in U.S. dollars). After adjusting for physician, hospital, and patient characteristics in hierarchical liner regression model, the costs per patient for were found to be $785 ($p=0.008$) higher than those for medium-volume surgeons, $1753 ($p<0.001$) higher than those for high-volume surgeons, and $1940 ($p<0.001$) higher than those for very-high-volume surgeons.
Conclusions: After adjusting for physician, hospital, and patient characteristics, low-volume surgeons performing wide excision with reconstruction surgery in oral cancer patients incurred significantly higher costs per patient than others.

Oral Track 28- Health Behavior

OT28-2

Knowledge of and Preventive Behavior towards Influenza 2009 (H1N1) among Residents of Bangkok, Thailand

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This study aimed to assess the knowledge of and use of preventive behaviors with regard to Influenza 2009 (H1N1) among residents of Bangkok, Thailand. In June 2009, a group of 1056 participants was interviewed, with 60% women and a mean age of 34.8 years (range 7-92). Respondents included students (33.6%), government officers (32.0%), private employees or vendors (19.9%) and unemployed persons or housewives (14.3%). Most participants (91.5%) did not report any symptoms of cold or flu in the previous two weeks. Fewer than half (45.4%) reported wearing a face mask when they caught a cold, a finding that varied significantly by age group and occupation (Pearson Chi-square p <0.001). The route of transmission was understood by 87.7% of the respondents, though 37% believed that the common cold could easily develop into Influenza 2009 infection. The belief that infection can be prevented with vaccination differed significantly with gender, age group and occupation (Pearson Chi-square p = 0.023, 0.019 and <0.001, respectively). Three-fifths of the respondents reported that they take care of household members ill with the common cold. Less than half of the respondents (46.1%) were aware that sneezing or coughing into the upper arm is recommended to prevent the spread Influenza 2009 (H1N1). This knowledge also differed with age group and occupation (Pearson Chi-square p = 0.017 and 0.004 respectively). Based on these survey findings, health education for Influenza 2009 (H1N1) may be improved if the gender, age group and occupation of the target population are taken into account.

OT28-3

A H1N1 and Human Security

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Today our world is shocking by the emergence of new disease that called as A H1N1 influenza. The disease is caused by H1N1 virus. The pandemic condition is unavoidable. WHO said that at present there are 94,512 positive cases in some countries. In Indonesia, the new cases is rising by 60 cases in the last 3 days (KOMPAS Daily, July 15, 2009) that it makes total cases are 112 persons. The pandemic can be considered as not only a health issue but also in many aspects of human life. Its spread and impact that felt by all levels of community cause the importance of consequences for human security. In the first part of the paper, it discusses about what is human security because the concept is a basic of the paper. Further, it discusses how A H1N1 can be considered as human security issue. At the end, it concluded with the recommendation especially for policy makers and practical workers.

OT28-4

Mapping the Female Sex Workers in Hong Kong

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Community-based surveys are commonly used to inform HIV/STI epidemiology in marginalized populations. In Hong Kong, such survey targeting female sex workers (FSW) was pioneered in 2006 and the second round is underway. During the planning stage of both rounds, geographical and social mapping were conducted to generate the sampling frame and facilitate interpretation of behavioural and epidemiological data. This paper presents the method and result of both mapping exercise and discusses its feasibility and importance. A three-phase and collaborative approach was used. In pre-mapping phase, existing publications and existing data of outreach teams were reviewed and key informants and FSWs were interviewed. The mapping and enumeration process took place within 7-day period, during which advertisements of FSWs and commercial sex establishments in newspapers and websites were enumerated and field enumeration conducted. Lastly, all data were collated and triangulated with opinions of key informants in consultation meetings. In both rounds, we identified 8 categories of reachable FSWs. They are those working at one-woman-brothels, karaoke/night clubs, massage parlour/brothels, bars, salons, saunas and the street FSWs. There are also FSWs who are difficult to reach hence cannot be enumerated. Using very similar method, approximately 10000 FSWs were enumerated in 2006, and 7000 in 2009. Geographically, distribution of FSWs has become more diverse. Socially, distinct characteristics, such as demographic profile of FSWs, client volume are observed for each type of FSWs. Our experience showed the mapping is practical and useful for understanding the HIV/STI epidemiology in FSWs.

OT28-5

Commercial Male Sex Workers and Condom Use to Prevent HIV/AIDS in Kathmandu, Nepal

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Objectives: A descriptive cross-sectional study was undertaken to estimate the proportion and describe the

factors associated with condom use with the clients amongst the commercial male sex workers in Katmandu, Nepal.
Methods: Data from 131 commercial male sex workers aged 19-54 years living in Kathmandu, Nepal were collected using convenient sampling method. Both descriptive and inferential statistics were used - chi square test was used to determine the association.
Results: The proportion of condom use with the clients was 69.5%.The mean age of the respondents was 26 years and 75.6% were 30 years and below. Twenty-nine percent engaged in alcohol drinking prior to engaging in sexual activities and the percentage of condom use was lower compared to the non-drinkers. Amongst the respondents 91.5% had good knowledge about HIV and modes of transmission, prevention and treatment was 14.6% and knowledge about proper technique of condom use was 64.1%. Positive attitude towards HIV/AIDS was 80.9% and towards condom use was 59.5%.Condom use was found to be significantly associated with alcohol drinking, attitude towards condom use, easy and free access to condom supply and support from the clients and peers.
Conclusion: Problems facing the commercial male sex workers and condom use should be addressed comprehensively in order to formulate appropriate programmes for proper health care to combat HIV/AIDS.

OT28-6

Higher Syringe Coverage for Lowering HIV Risk Behaviors among Needle Exchange Program Users in Pokhara, Nepal

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Objectives:To examine the association between syringe coverage and HIV risk behaviors among needle exchange program (NEP) users and to identify predictors of HIV risk behavior.
Methods:384 male injecting drug users (IDUs) aged between 16-39 years old and who had been using the NEP for at least three months were randomly selected from two drop-in centers of a non-governmental organization in Pokhara, Nepal, from April to July, 2008. Syringe coverage was defined as the proportion of syringes retained from the NEP to the total number of injections that had occurred during the past one week.
Results: Multiple logistic regression analysis showed that IDUs having <100% syringe coverage were more likely to engage in receptive syringe sharing (Adjusted odds ratio [AOR] = 3.98,95% confidence interval [CI]=1.13-13.92) and distributive syringe sharing (AOR=4.19,95%CI=2.10-8.35). No significant association was found between syringe coverage and risky sexual behaviors. IDUs who consistently used condoms with non-regular partners were less likely to receptively share syringes (AOR=0.20, 95%CI=0.04-0.87). IDUs who perceived themselves at risk of contracting HIV were more likely to practice distributive syringe sharing (AOR=3.21,95%CI=1.49-6.89). Married IDUs were less likely to use condoms with their regular partners.
Conclusions:Higher syringe coverage is associated with lower risky injecting behaviors. NEPs should provide adequate amounts of syringes to NEP users and encourage consistent condom use with non-regular and regular partners.

OT28-7

Cost-Effectiveness of Prophylactic Human Papillomavirus (HPV) Vaccine for Prevention of Cervical Cancer in A Country with High Prevalence of HPV Infection

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Human papillomavirus (HPV) infection had been demonstrated as a major risk factor for cervical cancer. Vaccines against HPV-16 and HPV-18 appeared highly efficacious in preventing type-specific HPV infection and related cervical lesions including cervical cancer. The objective of this study was to assess the cost-effectiveness of prophylactic HPV vaccination for prevention of cervical cancer in Taiwan. We developed a Markov model to compare the health and economic outcomes of vaccinating preadolescent girls for prevention of cervical cancer with current practice including cervical screening. Data were synthesized from published papers, and wherever possible, those specific to Taiwan were used. Sensitivity analyses were performed to account for important uncertainties and different vaccination scenario. Under the assumption that the HPV vaccine would provide lifelong protection, vaccination among preadolescent girls in Taiwan would result in a life expectancy gain of 4.9 days or 8.7 quality-adjusted life days at a cost of US$324 as compared with the current practice. The incremental cost-effectiveness ratio (ICER) was US$23,939 per life year gained or US$13,674 per QALY gained given the discount rate of 3%. Sensitivity analyses showed that this ICER would remain below US$30,000/QALY under most conditions, even when vaccine efficacy was suboptimal or vaccine-induced immunity waned that needed booster shots every 13 years. Prophylactic HPV vaccination on preadolescent girls in Taiwan would result in substantial population benefits. Nevertheless, we should not overlook the urgency to improve compliance rate of cervical screening, particularly for those at older age.

OT28-8

Knowledge, Attitude and Practices of Co-Benefits to Improve Health and Climate Change in 4 Major Cities of PRC China

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Introduction: Our literature review indicates limited research has been done to understand the public perception, attitude and related health practices which may also mitigate the impact of climate change. This study collected data from four major cities in China to investigate knowledge, attitude and behavior that might affect mitigate climate change and health outcomes.
Methodology: A population-based, multi-site, cross-sectional, random telephone survey using last birthday method, was conducted in July 2009. A study questionnaire, based on the International Panel on Climate Change (IPCC) guidelines for health sectors towards Climate Change and Health, was developed to understand the knowledge, attitude and behavior of Climate Change and Health in China. The study population comprised of land-based non-institutional population in 4 urban cities in China. A pilot study was conducted in Hong Kong to ensure validity and reliability of the modified instrument.
Results: Descriptive statistics, stratified by age, gender and education level will be reported. Multivariate analysis identified demographic and socioeconomic predictors for knowledge gaps in appreciating the co-benefits between health practices and climate change reducing strategies. Logistic regression examined the association between perception accuracy of and socioeconomic factors.
Conclusion: The gap between knowledge and practice of health and climate change co-benefits will be described. Demographics and socio-economic predictors for misconception will be identified. These findings serve to support the development of an evidence based public health education strategy to promote the co-benefits of practicing healthy habits and mitigate the effects of climate change.

Oral Track 29- Humanity & NGO

OT29-1

APACPH: The Impact of an Academic Network on Global Health in the Asia Pacific Region

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The Asia Pacific Academic Consortium for Public Health, a network of 55 universities in 21 countries represented by their Medical and Public Health Schools was the first such consortium to address health disparities in the APR through influencing policy, research and training in a coordinated manner over the past 25 years. APACPH was founded in the era of post colonial nationalism that highlighted the basic health needs of people. Its goals and objectives reflected the trends in Primary Health Care and Health for All. APACPH served as a platform for advocacy and policy change in sensitive but neglected issues- "The neglected female Child in Asia" and "Stigma and AIDS" in the late 80's. Such initiatives were made possible through the high level involvement of national leaders, commitment of premier member universities and collaboration with global institutions. Several strategies and mechanisms were instrumental in APACPH reaching its goals: (i) Focused Training for Global & National Health Leaders at the WHO Collaborating Center for Leadership Development University Hawaii. (ii) Nurturing Academic leadership for global health -deans VPs and University Presidents. (iii) Providing visibility to emerging problems: Pandemics, Disasters. (iv) Establishment of APACPH Centers of Excellence. (v) Promoting Shared Leadership-Rotation of APACPH secretariat among universities in USA Asia Australia. (vi) Developing Strategic Alliances through in-country networks. (vii) Publication of the first English journal dedicated to public health in Asia. (viii) Establishment of the International Cyber University for Global Health (ICUH) at Yonsei University. The paper traces APACPH's history, major milestones and global impact-achievements and challenges.

OT29-2

Opinion on Cadaveric Organ Donation and Transplantation in Multicultural and Multireligious Society: Computer-Assisted Telephone Interview Survey

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Background: Malaysia's organ and tissue donation rates are amongst the lowest in the world. Its rich ethnic and religious diversity allow for a comprehensive understanding the varieties of factors associated to organ donation.
Methods: A cross-sectional, population-based, computer-assisted telephone interview exploring multicultural and multireligion participants' knowledge, attitude, practices and behavioural on cadaveric organ donation and transplantation was conducted during February to April 2008.
Results: Although only 5.5% of the total participants (N=1174) claimed have registered to be organ donor, a further 35.2% of those who have not register for organ donation indicated willingness to donate one's own. Significant socio-demographic disparities with respect to knowledge and attitudes scores were observed. In particular, Muslim Malays (20.7%) indicate lower willingness to donate organs compared to the Chinese (36.6%) and Indians (51.4%) (P<0.001). In multivariate logistic regression analysis, willingness to donate one's own organ was associated with knowledge score (odds ratio=1.17, 95% confidence interval [CI]=1.13–1.22), attitude score (odds ratio=1.17, 95% CI=1.05–1.31), secondary school education (odds ratio=1.46, 95% CI=1.05–2.02) and Malay ethnicity (odds ratio=0.18, 95% CI=0.03–0.94).

Conclusion: The study shed light on social, cultural and faith differences of the three major communities in Malaysia and its influence on the opinion about organ donation and transplantation. Findings assist organ donation and transplantation organizations to reach out the diverse socio-demographic and ethnic communities with cultural-specific information about organ donation.

OT29-3

Peace & Health Improvement: Challenges in the Asia Pacific Region

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Violence is a leading cause of death and disability worldwide. Every day, over 400 people die as a direct result of war or some other form of collective violence around the globe. Morbidity rates range from four to ten-fold. Besides health consequences, violence can place significant burdens on national economies. In areas of the Asia Pacific where peace and social stability has prevailed, remarkable socioeconomic and health improvement have been observed. In others regional and internal ethnic conflicts have directly contributed to increased morbidity and mortality and destabilized health gains. Data collected on health indicators for displaced populations from areas of conflict was analyzed to assess health impact due to internal ethnic conflict and the efficacy of health and humanitarian services provided. Data suggests the lag in health gains is more evident and related to injuries as well as other sensitive indicators in maternal and child health and mental health including suicides. Migration and massive internal population displacements are evident in conflict zones creating significant demands for services for Internally Displaced Person(IDP) that become long term camps with the inherent human rights issues and the need for medical and public health intervention and advocacy. The role of NGOs, universities and neutral parties in reducing tensions and restoring trust in civil strife is a major and necessary commitment.

OT29-4

The Current Legal Issues of Informed Consent in Taiwan

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In recent years, informed consent has been the most important legal and ethical principle guiding medical clinic and research in Taiwan. Nevertheless the progress of relative medical law and regulations, including the new version of informed consent form issued by Department of Health in 2004, yet, cann't keep pace with the blooming amounts of disputes. For the foregoing reasons, this paper shall be presented the legal issues of informed consent in Taiwan and focuses on the current phenomenon of society and regulations. There are three major topics for my discussion. They are: the detailed and classified consent form, decision-making competence and divergent requirements between clinic and research. Owing to the official, unified consent form, patients, their legal representatives, spouse or relatives rarely fully informed about important information, even the basic benefit, risks and expenses. This paper suggests that we should differ the consent form from the clinical departments and patients who are teenagers, adults, and the aged. Furthermore, according to the current regulations, patients' competence are frequently measured with the standardized thinking of patient's age —legal majority, pass over teenaged patients ,and transfer the rights to be informed and consent to their relatives. Even the adult patient, though not in a coma or emergency, yet they are not always informed the true or whole conditions. There is no denying that family members usually play important roles in assisting with a patient, but definitely they cannot replace the autonomous decision of individual himself/herself. Competence is a legal concept and every person (in some countries young children under certain years or people with impaired mentation may be treated as exceptions) is presumed to be competent unless determined otherwise in a legal process. Therefore, how to define a patient as an incapable person and build a reasonable and systematic procedure would be the necessary and essential work in the future. Finally, because the different characters (such as purpose, risk, especially the necessity for patient/participant) of medical clinic and research, no matter from prospective of autonomy or protection, thinking it more carefully will make us keep awareness with sharp bright eyes to treat human in more reasonable way.

OT29-5

Health, Haste and Harm: International Aid Workers and Local Knowledge in A War-Torn Sri Lanka

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International aid workers who provide health services to areas affected by violent conflict have a particular responsibility to make sure their activities do not exacerbate existing tensions. One important measure in this respect is to consult and involve local resources and community organisations that represent knowledge and expertise in relation to the conflict (Green and Ahmed, 1999; Smillie, 2001; de Silva, 2009). Checking how various aid activities can affect power relations, ethnic divides, and distribution of resources in the war-affected community are among the actions recommended by Mary B. Anderson with her concept Do No Harm (Anderson, 1999). Even though this approach is well-known in the international aid community, recent studies have revealed that the principles of Do No Harm are often difficult to put into practice in humanitarian

emergencies (Rajasingham-Senanayake, 2005; Hyndman, 2007; Ruwanpura, 2008; Lee, 2008; de Silva, 2009). One oft-cited reason for this shortcoming is that local consultations are regarded as time-consuming undertakings. In humanitarian emergencies, where time is seen as a scarce commodity, local involvement repeatedly loses priority. Presenting qualitative data collected in eastern Sri Lanka in the autumn of 2008, this paper explores the relationship between members of the international aid community and local resources. It asks whether speed is the actual reason why local knowledge about health and peace is sidelined in emergency operations. Haste may not be the true problem but rather a cover-up of lingering post-colonial 'us-and-them' undercurrents of international humanitarianism.

OT29-6

Emergency Medical Technicians Role in Camps of Internally Displaced Persons Lessons Learnt from Sri Lanka- A Qualitative Study

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Introduction: A shortage of healthcare needs including drugs and trained-personnel emerged during the acute phase of managing internally displaced people in Northern and Eastern provinces in Sri Lanka. Groups of Emergency Medical Technicians(EMTs) deployed in these camps. This study obtained feedback on their experiences to understand the role of paramedicalpersonnel in such situations.
Methodology: Semi-structured interviews and small-group-discussions were held with 37 EMTs upon their return. Open-ended-questions, free listing and ranking were used to obtain data. Responses were recorded verbatim and analyzed qualitatively.
Results: Ethnic composition was; Sinhalese-30, Tamils-5, Muslims-2. Only 2 Sinhalese EMTs were fluent in Tamil and they were accepted and recognized more by local community. Language barrier was rated as the main difficulty. EMTs took part in activities such as health education, dressing wounds, stabilizing fractures, triaging, checking blood pressure and giving CPR. Their training to provide health care needs in extreme situations had been useful in this mission particularly since resources and facilities were limited. Inadequate training in managing highly infective situations (hepatitis, chicken-pox) was noted. All the EMTs believed that knowing Tamil as health care workers helped in improving racial harmony.
Discussion: Although trained to provide emergency care, EMTs were capable of managing ongoing health issues of this community. Their training was useful in facing the difficulties and challenges of a resource poor setting of an IDP camp. They need more training on language skills, and management of infectious situations.

OT29-7

Household Preparedness among Flood Affected Area of Keraniganj Subdistrict, Dhaka, Bangladesh

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Flood is the most common natural catastrophe in Bangladesh and every year this country has to face significant loss due to this natural disaster. Although it is a regular phenomenon of inundation of majority of the total land area of this country during this calamity but its intensity varies among regions and topographical settings. In the study area, Sakta union of Keraniganj sub-district in Dhaka, Bangladesh; it has been reflected that normal flooding has become integrated part of the daily life of the people. A cross sectional study was conducted to determine the level of household preparedness of the household heads and factors associated with it; namely general characteristics of the household heads, knowledge and perception of household heads about flood, flood preparedness and flood management protocol. Study on 280 household heads revealed that household preparedness for flood remained poor (19.6%) in spite of good knowledge and perception about flood, household preparedness for flood and flood management protocol. The single least perception that has been identified among the household heads was perceived barriers (26.8%), which reflect that they faced some obstacles to take preparedness measures for flood. Stepwise multiple linear regression showed that the education, knowledge, perceived susceptibility, perceived severity, perceived benefit, perceived barriers, and perception on flood management protocol could explain the variation of household preparedness at 26.9% (R2adj= 0.269). Based on the analysis, it was recommended that awareness programme should involve the local leaders and should be focused on the consequences of their unsafe behavior of not being prepared for the flood. It was also suggested to take initiative by the government to formulate clear guidelines regarding this issue for ensuring availability of the necessary items for household preparedness for flood and training in advance for safe evacuation in the event of extreme flood.

Poster Session I

FP-001

Simple Approach to Measure Economic Bureden of Dengue

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Background: Dengue is often a fatal viral disease. To find the practical and easy method is to carry out a comprehensive assessment of the burden of dengue for the population in order to provide health burden information to government.
Methodology: There are number of strategies to assess the cost burden in Dengue. We will here discuss the different methods and evaluate the practical one on the basis of benefit and rationality.
Result: To measure the burden of the DF, we have to know the incidence / prevalence, direct cost, indirect cost. The incidence / prevalence rate is easily available. But the Cost has to be measured. If we can measure direct costs (e.g.- bed, drugs, food, lab, physician etc.) and the indirect costs (e.g. loss of work, attendant, travel etc) then we can find the total burden of the DF. There are other methods to explore the Intangible costs, like pain, anxiety, inconvenience and other factors, which decrease quality of life, are intangible cost. Hence Disability-Adjusted Life Year (DALY), Years of Life Lost (YLL) and Years lived with Disability (YLD) could be other options but Dengue rarely makes any disability. DALYs are the sum of YLLs and YLDs. The DALY calculation also incorporates 2 adjustment factors, discounting and age weighting, which finally relates nothing.
Conclusion: Though there are number of choices to assess the economic burden of dengue, the feasible practical method will be the first one.

FP-003

Spatial Pattern of Malaria in Mamuju Subdistrict, West Sulawesi Indonesia

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Malaria is still a problem for World Health including Indonesia. Around 49,6% or approximately half people Indonesian assumed living in risky area of Malaria. The aim of this research is to analyze the epidemiological spatial pattern of Malaria in Mamuju Subdistrict in 2008 using Geographical Information System in case of mapping the distribute area to be as information in planning prevention and elimination Malaria Mamuju Subdsitrict. Type of research is Cross Sectional using Geographical Information System approach which is able to visualize, excess, sort, and analyze the data in spatial. The population is the whole cases of Malaria in Mamuju Subdistrict. Sample is the whole fill the condition was 266 Malaria patient. The analysis of the spatial pattern showed stratification high risk area malaria are Karampuang, Rimukku and Binanga village, trend case in characteristic area of height 51-100 mdpl is 224 cases (84,2%), area of the river bank with the buffer zone at the distance 3 Km is 51 cases (19,1%), the characteristics area in border beach/laguna with the buffer zone at the distance 3 Km is 56 cases (21%) and the access to the public health care centre on malaria cases within 0 – 5 Km is 26 cases (9,7%).The particularity of spatial pattern of Malaria in Mamuju subdistricts is the characteristic of plateau, and border beach/laguna. The particularity of spatial pattern of Malaria in Mamuju subdistricts is the characteristic of plateau, and border beach/laguna. District Health Office of Mamuju is expected to develop the strategy in controlling certain areas with highest number of Malaria with the geographical characteristic which enable the spreading of Malaria in Mamuju Districts.

FP-004

Food Allergy: A Public Health Issue

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Food allergy, an immune system response to a certain food, is a chronic health condition that can be life-threatening. According to the National Institute of Health (2009), more than 12 million Americans have food allergies, and about 3 million of them are children. Severe food allergies account for 150-200 fatalities each year. It is estimated about 50,000 trips to the hospital emergency room are caused by food allergies annually. Food allergies have a profound impact on individuals and their families. The management of food allergies is primarily dependent on individuals and families. Although there have been a few recent initiatives regarding to food safety, the absence of world-wide food allergy awareness and policies can still place individuals at great risk. Food allergy related fatality is 100% preventable. This paper summarizes important facts of food allergies and impacts of food allergies on individual and family. In addition, food allergy related regulations in the United States will be discussed. Information and resources regarding to food allergy in the world will be exchanged.

FP-005

A Study of the Needs of the Utilization of the Services of Long-Term Care Program

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Background: The need for long-term care is increasing because of longer life expectancies and aging populations. Therefore, a long-term care program has been launched in Taiwan program last year to meet the

rapidly increasing need for long-term care in Taiwan's aging population.
Aim: The aim of this study was to understand the needs of the utilization of long-term care services under the program provided by government.
Design: Disable people who were subsidized through a long-term care management center at middle Taiwan from Oct-Dec 2008 were selected to be the study subjects. A total of 299 people were included.
Results: The results of this study showed the younger persons with disabilities also in needs of long-term care services. It was also found that those people who living alone, with the physical and mental handicap, or with cognitive impairment have higher demanding in long-term care services. The homecare service was highly acceptable, however, institutionalization relief service were low. In addition, more than 40% of the subjects were with more than four chronic diseases, and 60 % were in the risk of malnutrition.
Conclusion: The result that shows there still a slightly diversity of demanding and utilizing the services in long-term care program. In order to help those disabled people appropriate, we should have a better understanding of actual demands of disable person and the reasons behind the diversity of their services utilization.

FP-006

Interaction between Type 2 Diabetes Mellitus and the Consumption of Tea or Coffee on the Risk of Dementia

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Background: Previous studies observed caffeine intake were associated with neuroprotective effects and a lower risk for type 2 diabetes mellitus (DM). However, the interaction between tea/coffee consumption and type 2 DM on the risk of dementia is unclear.
Methods: This is a case-control study including 169 patients with Alzheimer's Disease (AD), 97 patients with vascular dementia (VaD), and 215 controls from National Taiwan University Hospital and Cardinal Tien's Hospital from 2007 to 2009. A questionnaire was administered to collect information on the consumption of tea/coffee and other variables.
Results: Coffee or tea consumption was not significantly associated with the risk of AD and VaD after adjusting for age, sex, body mass index, and religion. Type 2 DM was significantly associated with a 4.21-fold risk of VaD [95% confidence interval (CI)=2.09-8.47]. Significant interactions were observed between tea consumption and type 2 DM on the risk of AD (P=0.047) and VaD (P=0.018). However, this phenomenon was not observed for coffee consumption. Coffee non-drinkers with type 2 DM had a higher risk of AD [adjusted odds ratio (AOR)=7.94, 95% CI=2.90-21.72] and VaD (AOR=8.24, 95% CI=2.82-24.10) as compared to coffee drinkers without type 2 DM.
Conclusion: Tea or coffee consumption may modify for the association between type 2 DM and VaD. Tea is a more popular drink in Asia than in the western countries. Future studies on tea consumption are warranted in Asian populations.

FP-007

A Randomised Controlled Trial of One Year Protein Supplementation on Body Composition and Muscle Mass and Strength in Elderly Women

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Rationale & Objectives: To date there have been few randomized trials of sufficient power to examine the effects of high protein intakes on muscle mass and strength in the elderly. The objective was to examine the effectiveness of whey protein supplementation on preventing sarcopenia in elderly women.
Materials & Methods: A population based, one-year randomized, double blind and placebo controlled trail of protein supplementation study was conducted on 219 community-dwelling ambulant women age 70 to 80 years. Participants consumed either a protein supplement drink (30 g protein daily) or a placebo isocaloric drink (1.7 g protein). Body composition was assessed by anthropometry and whole body dual-energy x-ray absorptiometry. Knee strength was assessed by isokinetic dynamometer.
Results & Findings: One-hundred and ninety-five participants completed one year visit. There were no significant differences in baseline characteristics between protein group (n=100) and placebo groups (n=95). Both groups increased whole body lean mass (protein: +1.6% $p< 0.05$, placebo:+2.3% $p<0.05$), total fat mass (protein: +0.7% $p< 0.05$, placebo:+1.5% $p<0.05$), body weight (protein: +0.8% $p< 0.05$, placebo:+1.5% $p<0.05$) and knee strength (protein: +31% $p< 0.05$, placebo:+36% $p<0.05$) after one year. The percentage of fat mass maintained at the similar levels as at baseline in both groups. There was however, no treatment effect between groups.
Conclusions: Muscle mass and strength increased due to extra energy intake regardless of the macronutrient composition differences of the supplements.

FP-008

Vascular Access Use in Incident Hemodialysis Patients in Taiwan

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Objective: Analysis on dialysis access type in incident hemodialysis patients in Taiwan- The effect of timing of construction on access type
Methods: This was a patients based retrospective cohort study. The claim data of the Taiwan' National Health Insurance Database, contains almost all the Taiwanese as beneficiaries, was used. The incident hemodialysis patients in 2005 were included in the study. Type of vascular access of very first access created for each patients were grouped into 3 groups: arteriovenous fistula (AVF), arteriovenous graft (AVG) , and permanent cuffed&tunneled catheter (Permcath). Patients who received first access creation procedure at least 30 days before starting hemodialysis were defined as early creation. Those had there access creation within 30 days before their dialysis or after dialysis were grouped as late creation group. The correlation between type of vascular access and timing of creation was analyzed by using Polytomous Logistic regression after controlling the confounding factors such as gender, age, and comorbidities.
Results: There were 8192 incident patients (male, 49%; female, 51%) in the investigation. 48.5% of the subjects were over 65 years old. 55% of the patietents were diabetic. 30% of the patients were among the early creation group. There were 5995, 1282, and 670 patients in the AVF, AVG, and Permcath group respectively. After adjustment of gender, age, and comorbidities, we found that early access creation tends to facilitate the percentage of AVF creation.
Conclusions: Based on our analysis, early referral for access creation should have positive effect on fistula creation.

FP-009

Modified Mini Nutritional Assessment (MNA) Can Predict Nutritional Status and Four-Year Follow-Up Mortality in Older Taiwanese

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Background: Nutrition is a key element in geriatric health and nutritional monitoring is a key component of comprehensive geriatric evaluation.
Objective: This study attempted to validate the ability of two modified Taiwan versions of the MNA with their abilities to predict the long-term mortality risk in older Taiwanese.
Methods: The study analyzed data of the "Survey of Health and Living Status of the Elderly in Taiwan" (SHLSET). Subjects' nutritional statuses were classified into malnourished, at risk of malnutrition or normal according to three MNA versions. Kaplan-Meier survival analysis was performed to determine their follow-up four-year mortality curves. MNA Taiwan version-1 (T1) adopted population-specific anthropometric cut-points and T2 had expanded MAC and CC weightings to replace BMI item. Regression analysis compared the impact of the MNA versions on follow-up survivability.
Results: During the follow-up 4 years, the malnourished elderly had 6-7 folds and the at-risk elderly had two folds of the mortality risk of those rated normal. The survival curves were significantly different from each other among the three nutritional groups in all three versions. Overall, T2 had the best predictive ability whereas T1 was next. Regression analysis showed that the T1 & T2 had improved mortality-predicting ability over the original MNA.
Conclusion: Results indicate that all three versions of the MNA have good mortality-predicting ability. However, the modified versions, especially T2, have improved ability. Together with other indicators, the MNA may be of value in developing into a tool for predicting long-term care needs of the elderly.

FP-010

Incidence of the Major Stroke Subtypes in Taiwan

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Few population-based stroke incidence studies have been conducted in Taiwan. The purpose of the present study was to investigate the first-ever stroke incidence by stroke subtypes among 30 to 100 year-old Taiwanese. A dynamic cohort of 114,145 stroke-free people was established by using the Longitudinal Health Insurance Database 2000 provided by the Bureau of National Health Insurance. The cohort were followed up from 2000 to 2006 to identify new stroke cases, and the total observed person-years were 687,953. There were 2,310 stroke cases indentified in the study period. The age-standardized incidence rates of stroke per 100,000 person-years were 447 in male, and 291 in female. The incidence was 230 per 100,000 person-years for ischemic stroke (IS), 78 for intra-cerebral hemorrhage (ICH), 11 for subarachnoid hemorrhage (SAH), and 49 for unclassified stroke (US). For the elderly (over 65 years), the incidence was 888 per 100,000 person years for IS, 225 for ICH, 22 for SAS, and 199 for US. The age-adjusted incidence rates in this study are higher than those of most western countries. ICH is more common among Taiwanese than among Occidental people. The incidence of IS for the elderly is higher than that reported in 1992, and those reported from Beijing, Shanghai, and Changsha because of a fast-aging society. In addition, the incidence of ICH is relatively high and close to that in Beijing indicating an urgency to launch appropriate public health campaigns to prevent the occurrence of IS and ICH.

FP-011

Workplace Violence from Citizens (1): Public Health Center

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Objective: To explain actual circumstances in which community health workers receive violence by citizens and actual safety management systems to protect and deal with violence. Methods: A questionnaire study was completed in January 2009, asking 517 public health centers about violence from citizens and safety workplace management.
Result: 70% of the questionnaires were collected. 93% of respondents were public health nurses, 95% of those was female, 76% of those had more than 20 years practical experience. 85% of the facilities discussed on violence in advance, and 85% asked for support from other departments in the facilities. 48% of the public health centers experienced violent incidences, ranging from one to 18 cases. The situations in which violence happened were during home visit, telephone counseling, and in-facility guidance. Types of violence included psychological violence by language, physical violence, threat, and sexual violence. 97% of the respondents could discuss the violence within their workplaces without hesitation. 19% of the facilities had prepared violence management manuals. 20% of the facilities had practiced workshops or in-facility trainings.
Conclusion: Further investigation is needed to collect more information on how citizens' violence occurs. Although assailants could be violent, they are citizens who have health problems and still need support. To assist them, development of careful violence prevention and protection management manuals is needed.

FP-012

Assessment of Medical Laboratory Quality Management in Relation to ISO 15189:2007

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The objectives of this study were to assess the quality management of 95 medical laboratories at regional and general hospitals under the jurisdiction of the office of the permanent secretary, Ministry of Public Health, Thailand, in relation to ISO 15189:2007 and determine the relationships between role perception, leadership and organization climate with medical laboratory quality management. This study was a cross-sectional study. Data were collected by self-assessment questionnaire distributed to 95 medical laboratory unit chiefs. Statistical analysis used were Pearson's product moment correlation coefficient and stepwise multiple regression. Results revealed that role perception, leadership and organization climate were significantly related to quality management of ISO 15189:2007 ($p<0.001$). Leadership of the medical laboratory unit chiefs and organization climate were the variables that could explain the quality management of ISO 15189:2007 at 17.1% (R2adj 0.171). It is recommended that medical laboratory unit chiefs should enhance their leadership and be responsible for design, implementation, maintenance and improvement of the quality management. Top management should ensure that the organization structure, organization policy, surrounding and technology which contribute to a quality management system have been made in relation to requirements of ISO 15189:2007.

FP-013

Effect of Training for Nurses Working in Teaching District Hospitals

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Introduction: Knowledge, like muscles, must be nourished-constantly and used frequently to retain function. Learning like motion, is more easily maintained if it's momentum has not been interrupted. The objectives of this study are to discuss the recent trends and development in various fields of nursing practice and update knowledge and skills in concerned nursing practice areas for nurses working in these teaching district hospitals.
Research Design and Methodology: It was single group pre-test post-test education intervention research design conducted among the nurses working in district and zonal hospitals of eastern Nepal in two slots in 2004 and 2005. Total 26 nurses (11 in first slot and 15 in 2nd slot) were involved in one-week skill oriented training programme. After pre-test training programme was taken. The collected data was analyzed using spss-4 package. The TA, DA and other allowances were provided to the participants as per WHO policy.
Results: It was found that in average there is 46% incensement in the score value in posttest. Regarding the programme evaluation most of the participants evaluated the content, duration, methods, clinical posting very good.
Conclusions: The participants were highly appreciated this workshop and requested to continue in future as it is very useful and practical.

FP-014

Development of the Animated Type Software for Nutrition Balance Check and Its Validity

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Purpose: The purpose of this study is to develop animated type software for nutrition balance check named "Meal Selection" and to examine its validity.

Subjects and Methods: 1. Development of "Meal Selection" "Meal Selection" was developed by Flash and able to use it on the Web site. Food images are arranged on the table mat on the screen using a mouse. Nutrients intakes are evaluated based on the Dietary Reference Intakes for Japanese (2005 edition). 2. Examination of the validity Subjects ware 21 female students of a Japanese university. They filled dietary records of a certain day by their selves and input their dietary record to "Meal Selection" in June, 2009. The same dietary records were calculated by the other nutrition software which appeared on the market and the both results were compared.
Result: 524 kinds of food and dishes are stored as data base in "Meal Selection". Evaluations for amount of nutrition intake of every meal and every day were displayed on the different 5 screens. Average intake energy per day by "Meal Selection" was 1627kcal and by the other nutrition software was 1592kcal. There was no significant difference between above both results by t-test. In other nutrients, there was neither significant difference in average intake per day, nor average intake per every meal.
Consideration: It was found to be effective as the tool that users can easily know their nutrition intakes by "Meal Selection".

FP-015

Cell-Mediated Immunity in Chronic Obstructive Bronchitis and Asthma

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Background: The number of the mortality, mobility, and disability caused by respiratory diseases is considered high in Mongolia.
Methods: Studied in 2008, 18-75 years old 74 subjects with chronic obstructive bronchitis and the asthma at the Pulmonology Department, the National Central Hospital. Patients were examined via a questionnaire-based interview, clinical examination, cell immunity counting and spirometry test. Data were analyzed through SPSS program.
Results: In urban area, asthma is more occurred whereas in rural area. For subjects with the chronic obstructive bronchitis, CD4 was normal 73,1%; the level was lower for 19.7% and higher for 7,7%. For subjects with asthma, CD4 was normal 72%; the level was lower for 24% and higher for 4%. For subjects with the chronic obstructive bronchitis, CD8 was normal 73,1%; the level was low for 15,4% and high for 11,5%. For subjects with asthma, CD8 was normal 72%; the level was lower for 8% and higher for 5%. For subjects with the chronic obstructive bronchitis, CD4/CD8 was normal 69.24%; the level was lower for 15,4% and higher for 15,4%. For subjects with asthma, CD4/CD8 was normal 64%; the level was lower for 24% and higher for 12 %.
Conclusion: On the subjects with the chronic obstructive bronchitis and asthma, the amount of CD4 CD8 and CD4/CD8 was interestingly steady.

FP-016

The Influence of Diabetes Shared-Care Program on Patients with Poorly Controlled Type II Diabetes Mellitus

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Diabetes mellitus (DM) has become an important public health threat to Taiwan in recent years. About 30% of DM patients in Taiwan are poorly controlled, also known as the value of glycosylated hemoglobin (HbA1C) greater than 9%. Studies showed that the risk of cerebrovascular diseases and myocardial infarction will be reduced by 12%-16% if HbA1C is reduced by 1%.
In a single-center, prospective study, 35 poorly controlled type 2 DM patients were enrolled for assessing the influence of using Diabetes Shared-Care Program (DSCP), a DM intervention program to provide frequent interactions between patients and healthcare providers, and multiple educational courses to patients. A structured questionnaire with a five-level Likert scale was used to evaluate the knowledge of DM self care before and after nine-month DSCP was executed. Paired t test was used to compare the before-DSCP with after-DSCP knowledge of DM self care by the questionnaire and HbA1C.
Before DSCP, the mean HbA1C of the 35 patients was 10.08% (S.D.=1.01%). After DSCP, a significant reduction of 0.74% (9.34%±1.28%) in HbA1C was seen. According to the questionnaire, the after-DSCP knowledge of DM self care was 4.06 (±0.44), which is significantly higher than the before-DSCP one (3.67±0.51).
Our study showed that the nine-month DSCP is associated with the significant reduction of HbA1C (p-value=0.006) and the significant increase of the knowledge of DM self care (p-value<0.001). These results demonstrate a significant treatment effect from nine-month DSCP on poorly controlled type 2 DM patients.

FP-017

Comparison of Quality of Life between Patients with Non-Small Cell Lung Cancer and Healthy Subjects

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Background: Lung cancer is a major cause of mortality with substantial impact on survival and quality of life (QOL). We explored the characteristics and determinants

of the QOL in patients with non-small cell lung cancer (NSCLC) by comparison with healthy subjects.
Methods: We assessed QOL of 220 consecutive patients with non-small cell lung cancer (NSCLC) at the National Taiwan University Hospital in 2002. These patients were histopathologically confirmed and clinical characteristics and staging were reviewed. The interview included WHOQOL-BREF and utility measured by standard gamble. The QOL of the general population was obtained by selecting age-, gender-, education-, and municipality-matched healthy subjects from the 2001 National Health Interview Survey. Multivariate linear regression models were performed to explore the potential differences for scores of different domains and facets and their predictors, including demographic and clinical factors and staging.
Results: Patients with NSCLC had poorer QOL than the healthy subjects in the physical and psychological domains ($p < 0.001$) but not in social and environmental domains. After adjusted for other determinants, advanced staging of NSCLC was negatively associated with physical and psychological QOL. Patients with disease duration more than 1 year tended to have better scores in physical and environmental domains. Insight to one's own illness was positively associated with higher utility, social support and financial resources without negative influence on each domain of QOL.
Conclusion: QOL was significantly associated with disease severity and duration of NSCLC. Insight to one's own illness appeared a positive factor and deserved attention among Taiwanese.

FP-018

Improved Food Selection of Mothers on Complementary Feeding Practice in Vietnam

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Background: In Vietnam, the Protein and Energy Malnutrition (PEM) program has been used as a major strategy to reduce underweight and stunting. To accelerate the reduction of undernutrition, locally appropriate solutions for complementary feeding practices are necessary.
Objective: To identify influential factors of mothers' food choice on complementary feeding practice in rural Vietnam.
Methods: We conducted a cross-sectional study in two communes in Nam Dinh Province in Vietnam. In this study, 190 mothers and their children between 6 to 36 months participated. We collected data using questionnaires for mothers' knowledge and practice on complementary feeding. A 24h food recall survey was administered to mothers for collecting the children's dietary intake data. For analysis, we used a binary logistic regression model to identify the risk factors.
Results: Mothers who had good feeding practices were determined by a combination of 4 food groups (grain, meat, vegetable, oil) per meal per day. Mothers' good feeding practice was significantly associated with the following factors ($P<0.05$): higher education, availability of vegetables from home garden, availability of vegetables from markets, breastfed children and knowledge of mothers on how to encourage children to eat.
Conclusions: The study suggests that the mothers' knowledge on complementary food and availability of the vegetables are important key factors to promote mothers' good feeding practice.

FP-019

Risk Factors Associated with Neurological Complaints in Subjects Receiving Health Examinations

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Neurological symptoms can be the precursor of a major neurological disorder, such as permanent stroke, neoplasm, hydrocephalus, or dementia. Identification of risk factors associated with the neurological symptoms at early stage may prevent the progression to morbidity and mortality. We reviewed 218 subjects who attended a self-paid general health examination that included blood and head MRI examinations. There were 84 female subjects (38.5%), and 134 male subjects (61.5%). Among them, 51 subjects were found to have minor neurological symptoms (the symptomatic group). Demographics, biochemical variables and health behaviors were compared between the two groups. Ventricular width, interuncal distance and pons diameter were also measured by MRI and compared between groups. Multivariate logistic regression analysis shows smoking (OR=3.43, 95%CI=1.61~7.31), hematocrit (OR=0.89, 95%CI=0.81~0.99) and ICA diameters (OR=2.54, 95%CI=1.21~5.34) were significantly associated with the presence of neurological symptoms in subjects attending health examinations. Ventricular width, interuncal distance and pons diameter show no significant correlation with the presence of neurological symptoms. People seek high technological examinations to ease their worries. In this study, we demonstrate that smoking is the most significant factor associated with the neurological symptoms and is more important than MRI brain measurements. Most of all, smoking is preventable and these effects should be emphasized in future public health education. The results of this study have important implications for health promotion among subjects with neurological symptoms.

FP-020

The Contribution of Preoperative Chemotherapy in Survival of Patients with Non-Small Cell Lung Cancer (NSCLC) from Administration Database in Taiwan

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Background: Lung cancer is the first leading cause of cancer-related deaths in the world. 85% of all lung cancers are non – small-cell lung cancer (NSCLC). Current major care for NSCLC patients is surgical treatment, but several studies recently indicate that preoperative chemotherapy may improve the surgical survival in patients with NSCLC. However, there are very few studies concerning the territory in Taiwan. This study is to explore this issue further by using the secondary databases of government.
Objective: To explore the utilization of preoperative chemotherapy and whether it may improve the surgical survival in patients with NSCLC.
Method: A historical cohort study is adopted to conduct the study. After identification of newly diagnosed histological or cytological proven NSCLC from Taiwan Cancer Database (TCDB), the information will connect with the census registry, mortality registry and databases of the Bureau of National Health Insurance (BNHI) in 2004. The Cox' s proportional hazard regression was used to analysis the survival rate after adjusting the patient and hospital characteristics.
Result: We will present the utilization and survival of patients with NSCLC receiving preoperative chemotherapy or not.

FP-021

Influenza Vaccination and the Risk of Cardiovascular Event among Taiwanese Elderly

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Background: Influenza vaccination was inversely associated with all-cause death and hospitalization in the elderly. However, it is not clear whether influenza vaccination was protective for the risk acute cardiovascular events among elderly.
Method: We conducted a retrospective, hospital-based cohort study during 2007-2008 to assess the effect of influenza vaccine on cardiovascular events. The primary end point was acute cardiovascular event, including cardiovascular death, acute coronary syndrome, coronary revascularization, and acute stroke. Cox proportional hazards model and propensity score matching were applied for statistical analysis.
Result: A total of 445 vaccinated patient and 318 non-vaccinated patients were included. During a median 12 months (inter-quartile range: 11-12 months), 75 cases of acute cardiovascular event occurred. Vaccination was associated with a non-significant risk reduction during the follow-up interval (influenza season: hazard ratio 0.65, 95% confidence interval 0.33-1.28; whole season: hazard ratio 0.81, 95% CI 0.50-1.31). By propensity score 1:1 matching, 251 matched pairs in both groups were investigated. Vaccination was associated with a non-significant risk reduction in both periods (influenza season: hazard ratio 0.58, 95% CI 0.23-1.48; whole season: hazard ratio 0.64, 95% CI 0.33-1.24). For the subgroup analysis, influenza vaccine showed a borderline protective effect for the young elderly (hazard ratio 0.31, 95% CI 0.09-1.14, P= 0.08).
Conclusion: In the elderly, influenza vaccination did not have a significant protective effect on cardiovascular event among Taiwanese elderly. Only a borderline protective effect between influenza vaccine and acute cardiovascular risk among the young elderly (<75 years old) was shown.

FP-022

A Meta-Analysis of Weight Loss on Cytokines and the Effects of Gene and Weight Loss on Cytokines

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Our study objective was to determine the differences of cytokine between obese and non-obese subjects. We want to detect cytokine change during weight loss intervention, and to evaluate the relationship between the changes of cytokines and three SNPs. Furthermore, meta-analysis was used to evaluate the effect of weight loss on cytokines. In this clinical observed study, we recruited 70 obese and non-obese subjects and performed a weight control study for 3 months. We selected three SNPs which are leptin (-2548 A/G, rs7799039)、ghrelin (Leu72Met, rs696217)、CRP(+1059 G/C, rs1800947) genes. In meta-analysis, we want to explore the relationships of intervention of exercise/diet or orlistat medication drugs with cytokines improvement in 19 papers. All papers were randomized and controlled for intervention study. We found that leptin, hs-CRP are higher and ghrelin is lower in obese subjects than non-obese subjects. After weight loss, we found a significant declined in leptin and increased in ghrelin. Leptin SNP AA carriers have significantly higher triglyceride and hs-CRP concentrations than AG/GG carriers. After weight loss, AA carriers significantly reduce % body fat, DBP, cholesterol concentrations than AG/GG carriers. Our meta-analysis found that CRP, IL-6, TNF-α were significantly reduced, and adiponectin increased after weight control, especially in exercise/diet intervention group. Our study indicated that weight control intervention can indeed improve cytokines and show that weight loss can modify the inflammatory state. And we suggested that leptin SNP (-2548 A/G, rs7799039) can partly influence.

FP-023

Survival Analysis of Different Adjuvant Treatments in Patients with Colon Cancer from Administration Database in Taiwan

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Background: Colon cancer is one of the important cancers in Taiwan. There is about 8.04% of all tumor cases according to Taiwan Cancer Registry in 2005. Besides of surgical treatment, post-operational chemotherapy (CT) or concurrent chemo radiotherapy (CCRT) had been reported to improve the survival of patients with colon cancer in western countries. In Taiwan, there are only randomized control trial studies concerning the territory. This study is to explore this issue further by using the secondary database of government.
Objective: To explore the post-operational CT or CCRT effects on the survival condition patients with colon cancer.
Method: A historical cohort method is adopted to conduct the study. After identification of newly diagnosed and operated colon cancer from Taiwan Cancer Database (TCDB), the information will connect with the census registry, mortality registry and databases of the bureau of National Health Insurance (BNHI) in 2004.The Cox's proportional hazard regression was used to analysis the survival condition after adjusting the patient and hospital characteristics.
Results: This study will show the survival condition of patients with colon cancer after receiving post-operational chemotherapy or concurrent chemo radiotherapy in Taiwan.

FP-024

The Examination of the Method of the Nutrition Guidance for the University Girl Long-Distance Athletes-for the New Students-

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Objective: The previous studies indicated that the girl athletes had the wrong knowledge that weight could decrease if carbohydrate intake was reduced. Therefore the nutrition guidance was conducted directly and indirectly for proper knowledge learning, and the difference of the effect by that method was examined.
Method: Subjects: 6 girl athletes in the long-distance relay race club, who were enrolled in 2008. Investigation period: May, Jul. and Dec in 2008, 3 times in total Contents of investigation: Physical measurement, food intake frequency questionnaire The nutrition guidance: Directly method in May and indirectly method (paper based) in July.
Result: Although the significant differences weren't recognized in the physical measurement, there were significant differences in the energy intake between May and Jul., Jul. and Dec., and May and Dec. ($p<0.05$), also between May and Jul. ($p<0.05$), Jul. and Dec, and May and Dec. ($p<0.01$) in the calcium intake. The intake of grain especially rice by the direct nutrition guidance in May was less decreased than that by the indirect way. The intake of brightly colored vegetables in Dec. ($p<0.05$) was significantly increased compared to that in July.
Consideration: Because the intake of grain in the direct way was less decreased than in the indirect way, the direct method was more effective. On the other hand, though intake energy decreased, weight and fat rates didn't fall off by the paper based guidance. Repeated direct nutrition guidance is essential to proper nutrition knowledge acquirement.

FP-025

Epidemiology Survey on the Prevalence of Chronic Kidney Disease in Southern Taiwan

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Background : The high prevalence of chronic kidney disease (CKD) might contribute to the high incidence of end stage of renal disease (ESRD) in Taiwan. The aim of the study was to survey the prevalence of CKD in southern Taiwan, and the risk factors of CKD were studied.
Material and Methods: We conducted a cross-section study in a Kaohsiung county from Apr., 2007 to Jan., 2008. Stratified randomized sampling with population proportion was designed. After letter of notice, subjects could go to the assigned place to take a physical examination and questionnaire. Estimated GFR was calculated by Simplified MDRD equations and CKD was defined based on the criteria from NKF-DOQI guidelines. Logistic regressions were used to explore the relationship of risk factors to CKD, and all data analyses were done by SPSS software package.
Result: The standardized prevalent rate of CKD was 13.3% (95%C.I.:16.2%-18.8%). After adjusting age and gender, the risks of developing CKD were 1.3 (95%C.I.:1.0-1.6) for central obesity, 1.5 (95%C.I.:1.2-1.9) for hypertension, 1.9 (95%C.I.:1.5-2.4) for hyperglycemia, and 2.1 times (95%C.I.:1.7-2.6) for hyperuricemia.
Conclusion: This study demonstrates obesity, hypertension, hyperglycemia and hyperuricemia are highly associated with CKD in southern Taiwan. Early detection of CKD in community should be performed in Taiwan.

FP-026

Empowerment Model for AIDS Preventive Sexual Risk Behavior among Undergraduate Student in Nakhon Ratchasima Rajabhat University

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The objectives of this study was to developed empowerment model for aids preventive sexual risk behavior among undergraduate student. The samples of this study were selected from forty student leaders. The research methodology was action research which done in two steps 1) study context and environment 2) developmental process of aids preventive sexual risk behavior among undergraduate student . Tools used in collecting data were consisted of student leader knowledge tests, skill tests, student satisfaction questionnaire. The conclusions of model for aids preventive sexual risk behavior among undergraduate student began from study context and environment and developmental process by situation analysis. The problem solving steps included planning, action, observation, and reflection as following these steps. Action steps, knowledge and communication skill training program for student leader. The result of this efficiency model development revealed that the student leaders were increased of knowledge and communication skill. The most student had high satisfaction.

FP-027

Health and Lifestyle of University Entrants: A Cross-Border Comparison among Three Cities in China

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Background: Young people are not viewed as a priority in health-promotion efforts throughout the world. However, with reference to available findings it was found that they actually engaged in various unhealthy lifestyles.Very limited work has been done on intra-cultural, cross-societal variation between lifestyles of university entrants. We describe the lifestyle patterns and health status between university entrants studying in three cities in China.
Study design: Cross-sectional survey.
Method: Subjects of this study were freshmen of three universities in China locate in Hong Kong, Macau and Kunming. Anonymous, self-administered questionnaires were distributed through a university admission package either by mail or handing out directly.
Results: Response rates for Hong Kong, Macau and Kunming were respectively 80.8%, 65.0% and 100%. Hong Kong showed the most over-weight university entrants, having double the proportion of over-weight male students compared to that of Kunming (P<0.001). It also had the lowest proportion of students who exercise in a regular basis (P<0.001). Macau had the highest proportion of depressive entrants (P=0.003). The proportion of alcohol binge drinker in Macau was more than 3 times to that of Hong Kong (P<0.001). The proportion of current male smoker in Kunming accounted for 24 times to that of Hong Kong (P<0.001).
Conclusion: This study showed a large discrepancy in life-style and health status of youths across different societies with same cultural backgrounds. It provides baseline health information to the administrator to prioritise students' health needs.

FP-028

Education and Training of Health Care Providers in Bangladesh: Prospects and Challenges

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Background: Bangladesh has made significant progress in recent times in many of its social development indicators, particularly in health though it has a pluralistic health system and an issue of the role of the non-state health workforce. Still now, over 80% of people in Bangladesh turn to non-state sector providers. The purpose of the study is to look into the total workforce of health care providers working in Bangladesh, their production rates, nature of training and the process of recruitment.
Method: The method of this study is to review the literature particularly two reports named The State of Health in Bangladesh 2007 and Health Bulletin 2008.
Results: There are 15 government and 34 private medical colleges in Bangladesh. The total enrollment in the medical colleges is 4,816. A total enrollment in post graduate institutes is 2,042. Only 6 governmental institutes and 5 universities have offer MPH degree and produce around 200 MPH graduates annually. There are 65 nursing training institutes in the country. Each year around 1,200 qualify as diploma nurses. Courses on mental health, genetics, school and community health are inadequate in nursing curriculum.
Conclusions: The level of production is clearly inadequate to meet the needs of the country. The current array of training and skills does not fully match the needs of the country. The informal providers must be appropriately managed though the present health care policy ignores these informal health care providers.

FP-029

Knowledge and Perception of Public Health and Health Technology Student in Nakhon Ratchasrima College on Student Learning Centre Approach

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This research aimed to study the knowledge level and perception of public health student on student learning

centre. The obstacles, problems and suggestions of public health student on student learning centre were also investigated. The analytical survey was used for this research. The target population was the first year, second year of public health students with the number of 200, Department of Public Health and Health Tecnology, Nakhon Ratchasima College, Bangkok. The questionnaire was used as a tool and focus group discussion was also employed to obtain the details. Tool was tested for the reliability prior to usage. The statistical analyses were average value, percentage, standard deviation and the inferential statistics. The findings of this study indicated that the ! knowledge level was slightly poor to moderate level, whereas the perception was slightly good. After training program was established for these students, their knowledge levels were increased. When considering on each aspect, the study showed that, their satisfaction on student learning centered on the aspect of learning management by the teachers was at high level. The study on obstacles, problems and suggestions on student learning center indicated that the students' satisfaction was low in the provision of computer technology media and the available text books for self study. In conclusion, the students prefer to learn by student learning centre approach. However, the teacher has to prepare themselves and prompt to respond and clarify the questions. The distance learning was the most popular issue raised by students since they can work

FP-030

Exploring in Combination of Globalization with Local Characters in Public Health Education

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School of Public Health, Kunming Medical University is located in Yunnan Province, southwest borderland of China. We have been trying our best to promote the combination globalization with local characters in public health education. We have collaborations with universities or institutions of Germany, Finland, South Korea, Thailand and USA. We had seminars, researches, staff exchanges together with our counterparts. We encouraged our faculty and students went to poor villages for health education and promotion. Community-oriented health is our direction for public health education. Our experience showed that the globalization in public health education can promote academic level and elevate university staff's capacity. To combine globalization with local characters in public health education is a way to empower students and benefit development of a school of public health. Public health education plays a very important role for training, capacity building and health promotion. In order to face the challenges of public health, both SPH and CDC should have team working. Only when breaking the boundaries among different agencies, institutions and disciplines, realizing information and resources sharing, then we can promote public health for our community.

FP-031

Recent Trends in Health-Risk Behaviors among High School Students in Okinawa, Japan, 2002-2008

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The purpose of this study was to estimate secular trends in prevalence of health-risk behaviors among Japanese high school students in Okinawa from 2002 to 2008. The surveys were conducted in 2002, 2005 and 2008 in Okinawa, Japan, using an anonymous self-administered questionnaire. Date was analyzed to describe the prevalence of students who engaged in selected health-risk behaviors. In 2002, 2005, and 2008, the sample sizes were 2,852, 2,892, and 3,000, respectively. Health-risk behaviors studied include those that contribute to injuries, cigarette use, alcohol and other drug use, sexual behaviors, and dietary behaviors. There were significant increases in seatbelt use among males and females and motorcycle helmet use among female from 2002 to 2008. The prevalence of students who reported riding with a driver who had drinking alcohol decreased. The trends in lifetime cigarette use, early smoking experience, and frequency of smoking decreased among males and females. There were significant decreases in lifetime alcohol use, current alcohol use, and quantity of alcohol consumption among males and female. Female students who ever had sexual intercourse were significantly decreased. There were significant increases in condom use at last sexual intercourse among males and females. In females, unhealthy weight control behaviors such as describing themselves as overweight, taking diet pills, and having vomited were decreased. This study shows that various health-risk behaviors among high school students in Okinawa improved during 2002-2008.

FP-032

Drugs Use among Adolescent in Indonesia 2009

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Introduction: Adolescent is age phase where the human starting to explore everything of their life aspects, such physical growth, environment and how to response to those aspects. Some of environment aspect sometime is harm and endanger of their life, such as risk behavior (i.e. drugs abuse, sex and crime).
Method: A self administered questioner survey was deployed to junior and senior high school student in 33 provinces Indonesia in 2006. A reanalysis was conducted to identify drugs use, alcohol and smoking among adolescent age (10-18 years). The same study will be conducted by mid October 2009 and the same analysis will be implemented to show the prevalence changes.

Result: The study 2006 show smoking was prevalent 27% of adolescent ever smoking (50% boy-8%girls) and 15% of them smoking at least more than 1 cigarettes per day in the last 30 days. In alcohol use 8% ever use alcohol, and 6% ever consumed in the last 30 days. Drug use remain high, 5,5% in life time use (6% in 2003) and 3,9% in last year (4%, in 2003) and 2,5% in 30 days. First using drugs around 11-14 year and mostly use cannabis and ecstasy.
Conclusion: Drugs use and smoking among Indonesia adolescent is still relatively high. This situation describes that drugs trade among this sub population is exist. A drug use prevention program should be well designed for this age group to reducing demand. A Life Skill Education (LSE) is suggested to be implemented as one alternative.

FP-033

Integrated Competency-Based Learning/Problem-Based Learning in System Analysis and Design

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Background: Systems analysis and design (SAD) in healthcare is the scientific field that deals with information, data, and knowledge, and with the storage, retrieval, and optimal use of such information for solving problems and making decisions in an healthcare organization. Since SAD requires that one has the practical IT skill necessary to analyzing and designing complex information systems, a competency-based learning (CBL) approach that emphases the ability to apply knowledge and skills to solving real-world problems should be an effective way to deliver an online SAD course.
Objective: To evaluate the effectiveness of an integrated approach of CBL with problem-based learning (PBL) to SAD in healthcare. Method: The Competency of 9 students who registered for a SAD course was measured at two times during the semester with the use of a competency diary. Class project was used to discuss problems in SAD based on online group discussion. The Changes in the competency scores through the semester were analyzed by a Wilcoxon signed-ranks test, and the factors affecting learning effectiveness were identified by a chi-square test.
Results: The Competency scores significantly increased as the semester progressed in three competency categories: knowledge, skills, and problem-solving. The factors that had a significant effect on learning effectiveness were web-based project learning.
Conclusions: While there was a limitation on small sample size, the integrated CBL/PBL approach worked well for SAD in healthcare, and web-based project learning can be an effective to improve heath informatics competency in MPH course.

FP-034

Peace through Health; An Example from Sri Lanka

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Introduction: Health as a bridge for Peace is a concept evolving from spontaneous efforts of health-care-personnel to reduce the risks in war impacted areas. Several models have been introduced to clarify this concept, each model demonstrating that health serves as an instrument for peace both in preventive and curative aspects. Colombo Medical Faculty put this concept into action following the civil war in Sri Lanka when providing humanitarian assistance for the Internally-Displaced-Persons (IDPs) Work done A medical team from Colombo Medical Faculty conducted a 3 day health camp in Ramanathan relief village, Chettikulam, Vavuniya. This voluntary team of 27 comprised of academic staff, junior doctors, medical students and non academic staff including 4 Muslim and 5 Tamil doctors. They treated around 3500 patients and provided provided emergency treatment for the critically ill. Commonest complaints were respiratory-tract-infections, diarrhoeal diseases and skin infections. Good contribution and participation was seen among the members of the local community including community leaders, volunteer workers and refugees themselves. Take home message Academic institutions such as universities can play an active role in practical implementation of the peace through health concept. A multi-ehtinic tam-based approach will lead towards success of such interventions by gaining trust of the local community. Recognition and responsibility of an established institution help to gain confidence to maximize local collaboration and support.

FP-035

Prevalence of Sarcocystis SPP. in Rodents in Peninsular Malaysia

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A study of Sarcocystis spp. in wild and peri-domestic rodents in Peninsular Malaysia. was carried out using hematoxylin and eosin (H&E) staining and immunohistochemistry. The objectives of the study were to observe the prevalence of Sarcocystis among rodents in Malaysia, to identify them according to species and also to establish their public health importance.
One hundred and forty six rodents belonging to 7 species trapped in the states of Johor, Selangor, Kelantan and Kedah were examined. Formalin fixed specimens of brains and thigh muscles of the rodents were paraffin-embedded and sectioned. The histological sections were stained using two methods, H & E and

immunohistochemistry. Light microscopy was used to observe the morphology of the cyst structure and the species identified as described in other studies.
Of the 146 thigh muscles examined, 73 (50%) were found to contain Sarcocystis. The number of cysts per histological section varied from 1 to 136. The brain sections were found not to contain any cysts.
Rodents as an intermediate host to Sarcocystis pose a public health risk as they live in close contact with humans. Other animals such as felids, snakes, falconids and owls can also act as intermediate hosts. Studies have shown the prevalence rate of Sarcocystis in Southeast Asia to be high. Human infections with Sarcocystis spp. from rodents results in human muscular sarcocystosis, implicated with myalgia, erythematous subcutaneous nodules, fever, bronchospasm, cough, headaches, loss of appetite, weight loss and lethargy. Humans acquire Sarcocystis through the ingestion of cysts from undercooked or raw meat of infected livestock, which has been shown to harbour Sarcocystis in their muscles.

FP-036

Snail Survey in Two New Endemic Foci of Schistosomiasis Infection in the Philippines

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Two new foci of schistosomiasis infection were identified in the last four years in the Philippines. The paper is part of a study that confirmed the presence of the disease by determining the prevalence of human cases, population density, distribution and infection rate of the snail intermediate host, Oncomelania hupensis quadrasi and involvement of animals in the transmission of the disease. A snail survey conducted between March 2008 and February 2009 identified snail colonies and compared snail densities and infection rates between the new foci. All three villages from Cagayan Valley were positive for snails while only two out of four were positive in Negros after surveys performed along streams, creeks, irrigation canals, ricefields and other likely snail habitats. For the first time, four known quantitative sampling techniques namely ring, tube, filter paper and banana leaf methods were used to compare snail densities and distribution in the endemic villages. Snail sites in Cagayan showed higher densities and infection rates compared with those of Negros indicating active transmission in both foci. GIS mapping of the snail colonies revealed their location along specific sites in the river systems of the new foci and the possible direction of spread should there be heavy rains, flooding and water overflow. Analysis of water and soil factors revealed minor differences in the new foci. However soil calcium content seemed to affect shell size. Bigger snails were collected in Negros (Soil Ca content: 27.9-44.7 Meq/100g soil) compared with snails from Cagayan.

FP-037

Poulterers' Knowledge and Attitude to Avian Influenza and Economic Impact of Stamping Out in Allakuan Sidrap District, South Sulawesi Indonesia 2007

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Bird flu or Avian Influenza is contagious disease caused by type A inluenza virus transmitted by poultry. In Januari 2004, cases were reported occuring in several provinces in Indonesia, particularly in Bali, Banten, West Java, East Java, Central Java, and West Kalimantan. There were 3.842.275 chickens died. In West Java alone the number reached 1.541.427.
This study is dedicated to analyzing the poulterers' knowkledge of and attitude toward the occurence of Avian Influenza and economic consequences of stamping out. It is an observational, analitical and cross sectional study involving 81 poulterers as a sample, purposively selected for the study. The data are statically examined through Fisher'S Exact.
The study proves through Fisher'S Exact Statically examination that there is a relationship between the occurences of avian influenza and the poulteres' knowledge of the disease. It is indicated by a value p = 0,009 (p< 0,05). Meanwhile, in the analysis on the attitude orf the poulterers towards the occurrence of the disease, a value of p = 0,643 (p> 0,05). It simply means there is no correlation between the aattitude and the occurrence of the avian influenza. The proportion of economic loss of those who had been to a stamping out compared to those who had not is 14,1%.

FP-039

Development of IEC Model to Increase Poultry Farmers Participation in Controlling Bird Flu in Gowa District, South Sulawesi, Indonesia

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Introduction: Gowa is one of districts in South Sulawesi province reported the highest cases of bird flu (BF). There were 58 human suspects of BF and one patent died with Avian Flu (AV) positive.
Objective: The study was intended to develop a knowledge, information, and education (KIE) model to improve participation in controlling bird flu (BF) in Gowa district, South Sulawesi Indonesia.
Methode: This was a quasi experiment design post test without control whereas a mix methodology (qualitative and quantitative) was used. At baseline, knowledge, attitude and practice of farmers on controlling BF were measured. Besides, a learning strategy and media design was developed.
Results: The improvement of knowledge and attitude of poultry farmers was assessed together with development of participatory learning group. The study showed that improvement of knowledge and attitude of farmers and

family members on preventing and controlling for BF was seen. In addition, there were a participatory learning group with action plan to mentor in order to prevent as well as emergency action whereas BF will be happened. Conclusion: We conclude that participatory approach in developing IEC model is a helpful method to increase awareness and participation of poultry farmer and families on BF control and prevention. Local government should provide appropriate support such as relevant information regularly to that community group in order to enable them to participate in BF prevention.

FP-040

The First Outbreak of An Influenza A (H1N1) 2009, Thailand

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The early morning of July 3, 2009, the epidemiologist was called for the rapid increasing of the number of patients who attended at Mea Fah Luang University Hospital, Chiang Rai Province, Thailand with the signs and symptoms related to the respiratory tract infection. This might been the first epidemic of the Influenza A (H1N1) virus which looks like an outbreak on the large of infected people at the same area and the same time. After completely investigated, the epidemiologist found that the cumulative cases during 2- 7 July 9, 2009 were 165 cases, (July2, 2009= 16 cases, July 3, 2009= 33 cases, July 4, 2009=36 cases, July 5, 2009=54 cases, July 6, 2009=24 cases, and July 7, 2009=2 cases). The major sign were fever (70.34%), cough (83.89%), muscle pain (28.87%) and some of those presented diarrhea (4.24%). The total students who lived at the Chiang Rai campus were 1,115 during the epidemic period. The severity of 6 cases were found and admitted at the Chiang Rai Hospital where much more of the medical professionals. All of the severe cases were tested by RT-PCR, and found the positive result. All the positive result were provided Tamiful. Then, the attack rate was 89.70/1000 population. The mean age was 19.62 years (Min. =16, Max. =46). 68.49% were female, 58.09% were the 1st year student, and 22.86% were the 2nd year students. Most of the patients came from the school of Law (16.25%), and the school of Liberal of Arts (12.50%). There were 32 dormitories where the students lived. The rapid investigate the early infected at the dormitory and distributed the AVANTA to destroy the sources of disease, distributed the essential information, and identified the people infected and intensive care at the hospitals were the main strategies to control the disease. The very strong suggested that the Influenza A (H1N1) is the very rapidly transmit in the circumstance of the air condition classroom

FP-041

Effect of SARS Outbreak on Medical Utilization and Mortality: Example of 8 Most Common Procedures in Taiwan

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Background: Colon cancer is one of the important cancers in Taiwan. There is about 8.04% of all tumor cases according to Taiwan Cancer Registry in 2005. Besides of surgical treatment, post-operational chemotherapy (CT) or concurrent chemo radiotherapy (CCRT) had been reported to improve the survival of patients with colon cancer in western countries. In Taiwan, there are only randomized control trial studies concerning the territory. This study is to explore this issue further by using the secondary database of government.
Objective: To explore the post-operational CT or CCRT effects on the survival condition patients with colon cancer.
Method: A historical cohort method is adopted to conduct the study. After identification of newly diagnosed and operated colon cancer from Taiwan Cancer Database (TCDB), the information will connect with the census registry, mortality registry and databases of the bureau of National Health Insurance (BNHI) in 2004.The Cox's proportional hazard regression was used to analysis the survival condition after adjusting the patient and hospital characteristics.
Results: This study will show the survival condition of patients with colon cancer after receiving post-operational chemotherapy or concurrent chemo radiotherapy in Taiwan.

FP-042

Estimating Population Size of Endangered Deer Tuberculosis

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The Republic of Korea is the country consumes the above 85% of world-wide deer antler production volume. The annual amount of consumption reaches to 1,600 billon won ($ 1,300 million). The Breeding number was 50,000 in 1990, but it became 150,000 as three times as 1990's, and about 100,000 are bred to recently in Korea. Since bovine tuberculosis was first detected among 22 deer in 2005, 238 were reported in 2008, recently, 159 were reported until 2009 May. The occurrence area is also extended. It is a number which it accomplishes to the 0.25% of whole breeding number. At first, incidence cases were reported from Cheon-buk province (southern area of Korea), however bovine TB in deer has been spread to Gyeong-gi province (the central area of Korea). The deer is maintenance host of the bovine TB (Mycobacterium bovis) which is a zoonotic infectious disease. Consequently, the deer tuberculosis can infect human through oral/ gastronintestinal transmission by

ingestion of deer antler and deer blood or respiratory/ cutaneous transmission to veterinarian and farmer. Particularly, the death cases from TB (respiratory TB and other TB) was suddenly increased from 2000 to 2002, when the deer breeding number also reached the peak. For these reason, the purpose of this study is to estimate the endangered population of TB infection in Korea from the correlation between TB incidence and ingestion of deer antler and deer blood.

FP-043

Knowledge, Attitudes and Practices of Oral Health among Pregnant Women

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Introduction: Emerging evidence has shown that dental diseases may be associated with pre-term low birth weight, growth retardation, and pre-¬eclampsia. It has been recommended that dental care needs should be an integral part of the pre-natal care.
Objectives: To assess the attitude, knowledge and practices of oral hygiene among the pregnant women.
Methods: A cross-sectional survey was conducted among a random sample of 100 pregnant women. A self-administered questionnaire was used and a preliminary oral examination was done. RESULTS: The women aged between 20-42 years (mean 28 yrs). 42% were unemployed and 58% employed a dental visit was recommended by the gynecologist among 2% of the women. 36% believed that oral health affected pregnancy. 29% noticed changes in the oral cavity during pregnancy out of which only 24% changed the way of taking care. 15% found it uncomfortable to eat any food due to oral problems and this accounted for the unsatisfactory diet for 14% of them. 67% of the respondents were aware that the mother's diet affected the baby's oral health. 14% complained of bleeding gums, 6% of ulcers, 5% of stained teeth, 13% malalignment, 5% of toothache, 12% of food impaction, 6% of tooth sensitivity and 9% of bad breath. On examination, calculus was reported in 26 of the pregnant ladies and halitosis was reported among 5 of them.
Conclusion: Oral hygiene among pregnant women was fair. It would be advisable for Obstetricians to refer their patients for oral health check up

FP-044

Dentists' Role in Tobacco Control

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Background: All forms of tobacco are addictive and lethal. Scientific evidence confirms that smokers face significantly increased risks of death from numerous cancers, heart disease, stroke, emphysema and many other fatal and non-fatal diseases. Tobacco also causes deaths among non-smokers. Infants, children, pregnant women and fetuses are at particularly high risk from secondhand smoke. However, smoking remains the major preventable cause of premature mortality.
Objective: To provide an overview of dentist's role in controlling tobacco use.
Methodology: The prevalence of tobacco use and the clinical as well as intensive interventions for tobacco use and dependence was summarized. Evidence based literature was also reviewed. Recent literature on the status of tobacco control activities in dental practice was evaluated and recommendations were made regarding dentists' role in tobacco control.
Result: The use of any form of tobacco is deadly. Smoking kills half of all lifetime users and half those deaths occur between the ages 30 and 69. Health professionals have a unique opportunity to counsel individuals on why and how to stop smoking. Almost one-third of tobacco users visit a dentist each year; the dental clinic or hospital provides an excellent venue for providing tobacco intervention services.
Conclusion: Dental patients are particularly receptive to health messages at periodic checkups, and oral effects of tobacco use provide visible evidence and a strong motivation for tobacco users to quit.

FP-045

Effect of Oral Function Training on Mental and Physical Health among Community Dwelling Elderly People in Japan

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Objectives: Oral health associates with independence in daily living among elderly. This study aims to investigate the effect of oral function training on dietary variety, oral health, further on mental and physical health outcome among Japanese elderly.
Methods: Study design: Case-control study. Subjects: People aged over 65 years and consented to this survey. 25 subjects who involved oral function training for 3 months were in case group and 24 subjects were in control group.
Measurements: General oral health assessment index (GOHAI), repetitive saliva swallowing test (RSST), masticatory ability, dietary variety score (DVS), geriatric depression scale 15 items, and body mass index.
Study period: September 2008 and May 2009. Analytical methods; Wilcoxon signed-rank test and $\chi 2$ test were applied for comparison between baseline and after intervention. This study was conducted after approved by the Ethics Committee of International University of Health and Welfare.
Results: Mean age of the subjects was 70.8 years old. Among case group, RSST, DVS, GOHAI and masticatory ability were improved after 3 months, whereas there was no significant change. Among control group, RSST and DVS were decreased after 3 months.

Depressive symptoms were significantly decreased among case group (p=0.007).
Conclusion: Although the mechanism of influence of oral function training on mental health is unclear, oral function training were related to declining the depressive symptoms. For further study, longer period intervention and examination of association between oral function and mental health will be needed.

FP-046

The Association between the Mental Health and the Oral Functions

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Introduction: The mastication for enjoyment of food and the speaking for communication with other people are the important oral functions. Hence, the disability of these factors could be associated with impaired health outcome, especially mental health problems. This study investigated whether disabilities of mastication and speaking are associated with mental health problems. Methods: The data were derived from National Health and Nutrition Examination Survey (KNHANES, 2007) conducted in Korea. Only subjects from the KNHANES's over 20¬ years of age (3335 persons, 72%) were included in this study. The multiple logistic regression models were used to examine the associations between mental health outcomes and oral functions, adjusted for the confounders such as gender, age, TMD (Temporomandibular Disorder), and household income. Results: In the multiple logistic regression models, the disability of mastication was significantly associated with high stress (OR=1.33, 95% CI 1.09-1.62), depression during recent two weeks (OR=1.64, CI 1.21-2.24), and impulse of suicide during recent a year (OR=1.82, CI 1.37-2.42), respectively. In addition, disability of speaking was significantly associated with mental health problems (OR for high stress=1.54, CI 1.19-1.98; OR for depression during recent two weeks=2.17, CI 1.65-2.86; and OR for impulse of suicide during recent a year=1.87, CI 1.38-2.55).
Discussion: The disabilities of oral functions such as mastication and speaking could be related to mental health problems.

FP-047

Policy Analysis on Health Care Inequality among Internal Migrants in Ulaanbaatar, Mongolia

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Rationale: As it is stated in the New Constitution, approved in 1992, a Mongolian citizen is entitled to enjoy the right to choose the place to live. This right of citizens led to rapid migration flow to Ulaanbaatar city from the rural provinces which had influences, overburdening of the health care service and precipitation of health care inequalities in the urban areas. Methodology: "Eight Step Path of Policy Analysis" was used. Incidence of some health indicators, health care service accessibility, legal acts, government policies, survey reports and articles from scientific journals were consulted. Objective: To reduce inequality of health care service among in-migrants from rural area to capital city of Ulaanbaatar with proper policy. Result: There is more morbidity rate in Ulaanbaatar since burden internal migration. Poverty, lack of awareness, lack of knowledge of migrants is the main issues of health care inequality in Ulaanbaatar. On the other hand, structural or bureaucratic procedures, poor infrastructure, and informal payments are influencing in it. As seen the findings, there is no efficient method to reduce health inequalities among migrants in Mongolia. Certain policy options were selected from international experience. Those policy options were evaluated by the criteria as accessibility, costliness, effectiveness, and implementation. By projecting the outcomes National Health Inequality Report is the best option for initiating to reduce health care access inequality. Conclusion: Hence, we suggest that the first priority should be given to solidifying the National Health Inequality Report, based on the analysis of policy options conducted in the paper.

FP-048

Analysis of Equity Deployment Policy on Practitioner and Dentist in Indonesia Year 2009

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Since 1992, the temporary placement policy of general practitioner and dentist (PTT) has been applied albeit its distribution is not satisfying yet. Approximately 25 - 40% of local health centers do not have general practitioner, especially those in eastern part of Indonesia and regional conflict. Within it ideal ratio where 40 general practitioners served 100,000 inhabitants, only 3 provinces could fulfill it.
This is a qualitative approach research aim of analyzing the central government policies on equity distribution of general practitioners and dentists in Indonesia. In this research, data used consists of primary obtained through in-depth interview and secondary data obtained through the document assessment. Primary data gathered from various competent informants, namely the Bureau Employee Affair of Health Department, Bureau of Legal and Organization Affairs of Health Department, The Center of Human Resource Planning and Utility of Health, PPSDM Agency of Health Department, Medical Council of Indonesia, the General Directorate of High Education Ministry, the Indonesian Association of medical doctor, and the Dentist Association of Indonesia.

The results of research showed that this policies fall into a dilemma in the middle issue of human rights violations, while in the other side people need a health care without distinction on economic status. Coordination between stakeholders at the central level is not optimal yet, particularly in the policies preparation and monitoring on the policy implementation.

FP-049

Inequities in Health and the Concept of Structural Violence

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Social inequities in health are systematic, man-made, unjust and changeable. They constitute a violation of human rights - a discrimination of people with regard to income, education, and/or professional status. Peace science has formed the concept of structural violence. It is defined as socio-economic and political structures violating basic human needs. Structural violence kills, injures and halts development on a much larger scale than direct violence does. Any society where structural violence is predominant will therefore not be a peaceful one. Structural violence has also the potential of turning into social conflicts with the risk of escalation. This paper discusses the relationship between health inequities and structural violence on three different levels: Health inequities as symptom and indicator for structural violence, inequitable access to health care as one form of structural violence, and health deficits caused by violent structures as irreconcilable with health workers' values and ethics. The paper will reflect on the special role and responsibility of health professionals in the documentation and diagnosis of structural violence, in the reduction of social inequities within the health system, and in advocacy for social welfare and human rights protection. Furthermore, it will be explored how useful it is to introduce the concept of structural violence into the domain of public health.

FP-050

Access to Health Care

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Especially addressing a fair access to health care, both on national and on international level, with the aim of reducing social inequality, national legislatures must break with the tendency to go no further than declarations of intention, stipulation of national targets or, at best, statements of commitment on government level. When it comes to the application or enforcement of the law, or to any hypothetical legal claims based on the declaration of a fundamental human right to health, it is essential that this right be transposed into the law of the individual country, just as it will be necessary, as a next step, to equip the right to health at national level with the appropriate legal mechanisms that enable the individual to assert his or her rights. At the moment, this means that neither experts working in the health care system, for whom a fundamental national right to health would be a highly significant institution with a view to the concretisation of health care provisions on the level of simple law, nor persons who wish or are compelled to take advantage of the services of the health care system, are in a position to appeal to 'hard law'. The in-depth structure of the society or of the individual state has to be adequately decrypted, modified or further developed. Currently, it is impossible for actions to be conceived in their process-related character. Everything circles around access to health care institutions.

FP-051

Health Promotion and Health Equity: The Role of Higher Education

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Ottawa Charter in 1986 has stated that health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical mental and social wellbeing, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy lifestyles to wellbeing. One of the five major strategies is healthy public policy that establishes the environment that makes the other four possible. Therefore, healthy public policy is a pre-requisite for successful health promotion. A Healthy Public Policy is characterized by a concern for health and equity and accountability for health impact. Health should be made a priority item on the agenda of policy-makers in all sectors. Policy-makers should be made aware of the health consequences of their decisions. They should create pro-health policies, whether in the area of development, legislation, taxation etc. Consequently, the fundamental conditions and resources for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity. Improvement in health requires a secure foundation in these basic prerequisites. The paper discuss about the role of higher education in enhancing health promotion practice to reach health equity for community at large.

FP-052

Physical Activities and Barriers among Visual Impaired Students in Elementary School

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The purpose of this study was to explore the physical activities (PA) of the visual impaired students in elementary schools and the barriers they faced. Their parents' knowledge and attitude were also discussed in this study. There were two steps to collect data. The first, quality data obtained from observing 18 visual impaired students. In order to get more detail data deeply, 6 visual impaired students, 7 parents, and 7 teachers were also interviewed. The second, quantity data got from 75 parents of visual impaired students using questionnaires. The results showed that most of the students needed somebody to assist for guiding direction, and the parents' attitude was positive about their children activities. Visual impaired students spent 115.9 minutes on static PA each day, and only 32.8 and 17.8 minutes on mild and middle-strong PA. Main barriers of PA are "the restriction caused by students' visual impairment", "parents' and students' lack of time", "parents' worries about injuries and danger incurred by PA", and "students' unfamiliarity about methods and rules of activities". The parents' knowledge and attitude showed that "PA can promote health" and "parents will arrange more outdoor activities for their children as far as possible". These revealed the parents understood the benefits of PA. Therefore, it is important to find out the way to decrease barriers of PA and to promote students engaged in exercise.

FP-053

Ses Differences in Alcohol Related Mortality among Middle-Aged Men in Korea

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Background: South korea suffers greatly from economic recession, resulting in years of financial crisis and unemployment. Normally men as a breadwinner are influenced by an economic cycle. Tightening of job market and economic stagnation is a major cause for increasing stress level for men. They often try to reduce their stress level by engaging in activities such as drinking and smoking. Mortality therefore, is an accurate indicator to measure health status of men. Up to now, there have been attempts to examine mortality from smoking but lack of data in mortality from drinking.
Objective: So far, alcohol related policy in korea have not been systematic and purposeful due to lack of surveys carried out across the country. The main purpose of this study is to track the changes in alcohol related mortality among middle-aged men.
Content and Method: We used the 'death certificate file' and 'Alcohol attributable fractions (AAFs)' to calculate alcohol related mortality for every five years (1995,2000,2005). Statistical analysis consisted of multiple analysis as an independent variable (educational attainment, occupation, marital status).
Discussion: Findings of this study suggest that socioeconomic differentials in alcohol related mortality among middle aged men gets bigger. socioeconomic inequalities need to firm up a policy.

FP-054

A Survey among Foreign Spouse in Hunei

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Background: It was designed to explore the health status among foreign spouses in Hunei township in southern Taiwan using a population-based, cross-sectional study was conducted Methods: The demographic data and the data about anxiety scale, panic scale, insomnia scale and the short form-12 (SF-12) medical outcome survey, were collected during interviews of Hunei foreign spouse.
Results: The Vietnamese was the majority (60.2%) foreign spouse in Hunei, next the Mainland Chinese(27.3%). But the vacant rate of Mainland Chinese is much higher than Vietnamese (56.8% vs 7.2%) did. Over half of foreign spouse got married via introduction by relative or friends. The age difference around twelve years old(12.2+6.5years) between the couple. The handicap rate of husband was less than 7%, but near 70% husband drinking, smoking or both. Only 5.6% husband without any job and near half of foreign spouse have work. The major stress of life was educational problem about children(62.5%), next the economic reason(47.5%) did. Seventeen percent of foreign spouse suffer from insomnia everyday. The foreign spouse reported better health scores on all scales of the SF-12 than did the general US population (1998), but worse scores when suffering from anxiety or panic status, both on Physical Component Summary (PCS) and Mental Component Summary (MCS).
Conclusions: The foreign spouses in Hunei had better health than general US population. The anxiety or panic status could worsen their quality of life but not insomnia.

FP-055

Coping Stress Strategy for People with HIV/AIDS in Makassar City, Indonesia

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Rationale The coping Stress strategy performed by the people living with HIV/AIDS (PLA) to improve their quality of life need to be learn in relation to their perception of stress, and how they cope with stress.
Method Case study has been done to describe the coping

stress of PLA. There were 7 cases with different characteristics, they were already infected in 2-6 years by injection drug use, sex worker, infected by husband, unmarried, NGO worker, both man and women with their age 22-31 years and education level are high school. In-depth interview and observation were used to gather information Result The study revealed that the stressor for PLA is not only because of their status living with HIV/AIDS anymore, but merely to their families lives, socio-economic and health status of their families. How their family stays wealthy, afford their basic need, grow up their kids, etc. Coping Stress strategies have been performed in order to maintain their quality of life, included (1) Coping with Emotional focus, which more patient and reluctant to accept their condition by concern to religious activities (2) Coping focus on problem basis, including treatment, physical activities and improve nutritional status Their coping strategies preformed through their counseling peer group and social support from the Gaya Celebes Foundation Conclusion PLA Positive coping stress need to support by maintains their health care and family empowering to provide PLA quality of life.

FP-057

Prevalence and Associated Factors Related to Syringe Sharing Behaviors among Female Injecting Drug Users Who Are Also Sex Workers in China

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Background: Female injecting drug users who are also sex workers (IDUFSWs) bridge HIV transmissions from injecting drug users to clients of sex work.
Methods: A total of 216 non-institutionalised IDUFSWs recruited by snowballing method were anonymously and face-to-face interviewed.
Results: Respectively 33.8% and 27.8% of IDUFSWs injected with others' used syringes and gave used syringes to others for injection; 83.3% used condoms inconsistently during commercial sex in the last month; inconsistent condom use was significantly associated with syringe sharing (OR=5.00 and 1.96); 91% reported at least one type mental distress. Adjusting for significant background variables, all except one (feeling depressed) TPB-related (attitudes, norms, self-efficacy and intention) and psychological variables were significantly associated with injecting with others' used syringes (AOR = 2.08 to 6.25). Self-efficacy and intention derived from the TPB and having insomnia were significantly associated with giving used syringes to others for injection (AOR=2.00 to 3.56). In the final multivariate hierarchical model, three TPB-related variables (attitudes, norms and self-efficacy) and one psychological variable (hatred toward oneself) were independently associated with using others' syringes for drug injection (OR=1.98 to 4.02); self-efficacy and having insomnia were independently associated with using others' syringes (OR= 3.59 and 2.06). Conclusions: IDUFSWs were at high risk of HIV transmissions. Cognitions and psychological status are potential determinants of syringe sharing. Integrative and tailor-made HIV prevention programs targeting IDUFSWs are greatly warranted to slow down the bridging effects.

FP-058

Combatting Malnutrition in HIV/AIDS Patients through Local Food Consumption

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Nutritional status alterations are common with HIV infection. Wasting Syndrome increases the opportunistic infection. Albumin as an indicator of morbidity and nutritional status in hospital. South Sulawesi Prov. Board on HIV reported 997 with HIV (PLWH) in 2006, 907 in Makassar, 233 inpatients, 77 died from wasting syndrome and opportunistic infection.
Experimental Quacy non randomized pre-post design was conduted at Wahidin hospital, the study aim to describe the effect of fish albumin on hypoalbuminemia and nutritional status of HIV patients. Group A (16) intervention received food plus fish albumin and Group B (16) as a control received food high calori protein for 14 days.
Antropometric used for nutritional status, 24 hours for food intake, hemoglobine using human count, albumin using fotometer analyzer. Paired t test and independent T test were used to analyze the results.
The study found significantly increased (p<0,00) albumin and hemoglobine (0,6 gr% & 1 gr%) in group A compared with group B (0,1gr% and -0,4 gr%). Energy increased (784 vs 490 kcal) dan protein (29,5 vs 17,7 gr). In addition, body weight increased 3 kg vs 0,2kg, respectively.
Conclusion, snake fish can prevent hypoalbuminemia, increased nutritional status of HIV patients and good source of albumin.

FP-059

KAP Study on HIV/AIDS in the Garments Workers of Dhaka City

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Introduction: There are lots of people in Bangladesh in high risk-group; specially garment workers due to their poor income, illiteracy and migrant status. Almost 2.8 million workers work in this industry and most of them are women.

Objective: This study tried to assess the knowledge, attitude and practices in this young aged males and females. Methods: A cross-sectional study, on quick-survey basis, to explore the usual and common prevailing KAPs in the garment workers on HIV/AIDS. Two factories were selected for this purpose during 2007 and 507 persons were interviewed using a structured questionnaire.
Results: Demographic information was collected which reflected the lower income group (70%), mostly muslim, two-third married (63%) and migrated majority from northern Bangladesh (30%). They have poor access to information through newspaper (10%), TV (40%) and radio (25%). They have heard of HIV and AIDS but it was found they have lot of misconceptions and confusions about the cause, mode of spread, pathology, prognosis and prevention modes. 60% respondents though expressed to get tested for HIV. 23% of the people said positively of visiting brothels or floating sex-workers. The frequency was 1-5 times in the previous year. 80% of this group did not use condoms. 20% of the respondents have experience of alcohol/ addiction items sometime or often. Cannabis is the main addiction means. Usage of sedatives is 10%.
Conclusion: The particular needs and gaps of this highly vulnerable group of people should be addressed to avoid the risk of developing a concentrated epidemic. So proper precaution, advocacy and BCC campaigns towards this high-risk group of people should be taken immediately.

FP-060

The Paradigm of HIV and Survival Time among Hilltribe People in Thailand

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The retrospective cohort study design aimed to studies of current situation of HIV/AIDS, sexual behaviors, access to care and survival time in the six main hilltrib peoples in Thailand; Akha Lahu Karean Mong Yao and Lisaw, where the most epidemic of HIV/AIDS in Thailand. The study was divided into 2 phases. The first phase was a systematic extraction of data from medical records of hilltribe HIV/AIDS patients from a total 37 hospitals. The second phase, studied risk factors in hilltribe people by using a questionnaire derived by fact-to-fact interview. The questionnaires had been tested for validity and reliability. Statistic analyses were contribute by Survival Analysis and Cox-Regression
The results found that totally 608 cases from 37 hospitals, but only 581 cases were included in the analysis. The first cases of HIV/AIDS found Maesuai Hospital in 1990. 48.02% lived in Chiang Mai, 39.59% were aged 26-35 years at diagnosis. 64.89% was female, 36.14 was Lahu, 29.78 was Karean. 80.90% were still alive. 34.94% believed to have contracted the infection from their spouse, 22.55% were infected by sexual intercourse, 6.20% by IDU. 48.89% received ARV and 47.05% received OI drug. Survival Analysis found that those who received ARV presented 50%survival time at 12.39 years (p-value≤0.00) and who had received OI presented 50%survival time at 5.99 years (p-value≤0.00). Cox-Regression showed that having receiving ARV, OI, female sex, relig

FP-061

Religious Background and HIV/AIDS among Community People in Sri Lanka

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Objective: The number of HIV cases in Sri Lanka has rapidly increased recently, but their religious-oriented lifestyle could be associated with nation's low HIV prevalence. To understand the reasons of low HIV epidemic conditions and to design effective preventive strategies, knowledge, attitude, and practice (KAP) on HIV/AIDS among community people was assessed.
Methodology: The study took place in central Sri Lanka in April – May 2009. A total of 1,239 residents with 15 – 49 years of age agreed to complete the self-administered questionnaire or to have interviews (response rate=87.2%). A 20-minute-long, anonymous questionnaire consisted of KAP on HIV/AIDS and socio-demographic information.
Results: More than 70% of people followed Buddhism. There were more Buddhists than non-Buddhists who are married (63.4% Buddhists vs. 56.9% non-Buddhists) and completed advanced level education (45.3% vs. 28.6%). Non-Buddhists had more exposure to people living with HIV/AIDS (PLWHA) but showed more negative attitudes toward PLWHA. Also, they were informationally-deprived of HIV/AIDS prevention, especially condom accessibility (31.6% and 19.8%) and locations of HIV/AIDS testing and care facilities (26.6% vs. 17.9%). There was a small percentage of having had extra-marital sexual relationships (8.6% and 13.8%).
Conclusion: Buddhism followers generally had better KAP on HIV/AIDS than non-followers. Hence, it is important for the religious minorities to be aware of and to improve the access to right information of HIV/AIDS in order to minimize the potential risks.

FP-062

Young Generation and HIV/AIDS Epidemy in Indonesia

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The recent situation indicate that HIV/AIDS cases in Indonesia mount sharply and quickly since finding of in 1987. The estimated, a number of 169-216 thousand people live with HIV/AIDS in Indonesia. The young

generation (age 20-29 years) was the most suffering group of HIV /AIDS, that equal to 54,77%. This matter was triggered by sharing contaminated needles among IDUs. Considering these problems, we mean to analyze HIV/AIDS epidemic situation in Indonesia, what effort for preventing and overcoming effectively.
We use literature study to know what the background of HIV/AIDS epidemic in Indonesia. Then we analyze the problems with many research data that related to them. Sharing contaminated needles among IDUs and unprotected high risk sex behaviour were two main mode of HIV transmission in Indonesia. High mobility among high risk group population with crossing over of sex behaviour also influence the spreading of this epidemy. Unhappily, government have not owned strong political commitment, and HIV/AIDS have not been viewed as a threat. In general, society also still give discrimination and stigma to ODHA. Considering the impact of HIV/AIDS epidemic is very complex and can be groggy of nation life, especially the young generation, we need the effort of HIV/AIDS preventing and overcoming effectively.
There must be increasing of governmental commitment and stake holders capacities in managing program; accommodating all existing potency in society especially the young generation; developing systematic preventive structure, planned and measured; and also improve relationship and coordination

FP-063

Public Health and Human Rights in the Asia Pacific Region: A Comparison of Trends in Stigma and Social Acceptance in Leprosy and AIDS

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Even though health as a human right is endorsed by most constitutions in countries within the Asia Pacific Region (APR), there remain significant gaps between the implementation of policies and the reality of health equality for women as well as those who suffer from discriminations due to socially “unacceptable” diseases, such as leprosy or AIDS (acquired immune deficiency syndrome). Historically, patients of leprosy, Hansen’s disease, were managed by isolation in secluded area, such as islands in the APR countries. Trends of integrative care in leprosy are an indicator of social acceptance and the progress is comparable with social stigmatization and discrimination experienced currently by AIDS patients. This review research paper reports on the similarity and differences in social acceptance in AIDS and leprosy in major cultures and political systems in the APR.

FP-064

Household Support and Quality Life of PLHIV in Makassar

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Objectives: Diagnosis of HIV infection has a profound effect on the emotional and social well being of individuals and families. People living with HIV (PLHIV) undergo fear of disability, dependence and death and experience stigma and social isolation. Additionally, adherence to care is vital to the successful care of patients with HIV and AIDS. According to Ministry of Health, till December 2008, there are 2307 HIV and AIDS in Makassar. This research identified and described the relationship between household support and quality life of PLHIV. Household support includes emotional support, cognitive support and material support.
Methodology:1) Informant of this research is PLHIV on treatment from august 2007 till august 2008. 2) Member of household who have PLHIV in their house. 3) Indepth interview with with semi-structure interview.
Results: 1) Emotional support: Remind PLHIV to take their medicine, with right doses and right time. Be a buddies for PLHIV when start medication, especially ART. 2) Cognitive support: household find information about side effect of the drugs to health provider, outreach worker, or PLHIV buddies from support group. The information could be used when PLHIV get sick because of the side effect of medication. It makes household member prepared what they have to do with that situation. Their also improved their knowledge about HIV treatment and their co infection by participating workshop. 3) Material support: household also give traditional medicine, which is not have contraindication with modern medical treatment, such as snakehead fish, red fruit extract. Always, provide medicine and good food to improve PLHIV health status. Some household member also make a group such as support group among PLHIV family.

FP-065

Research on Behavioral Risk Practices and Susceptibility to HIV/AIDS among Street Based Female Sex Workers in Kathmandu Metropolitan City

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A cross-sectional descriptive study was conducted among 100 street based female sex workers (FSWs) in Kathmandu valley to assess their demographic

characteristic, sexual and reproductive health behavior and knowledge on HIV/AIDs. These street base FSWs were interviewed by using non-probability sampling methods. The study disclosed that majority of the street based FSWs were less than 18 years of age, unmarried, literate and belonging to the Tamang ethnic group. The mean age for first vaginal intercourse was 15.19 year, S.D. 1.98 years. A larger portion of the study sample has been in sex work for more than 5 years. The study revealed that the decade long insurgency was the major factor what motivated these FSWs to choose sex work as a source of income. More than 70% of the FSWs were involved in substance abuse. The average daily earning for most FSWs was NRs. 100-199. Almost 81% have undergone abortion and astoundingly almost 50 % of such abortions were done using traditional methods. Almost half of the respondents did not perceive risk of getting HIV due to misconception about HIV transmission which was evident when only 15% disclosed they used condoms at all times. About 73% of the FSWs were victims of sexual violence with 46% choosing not to file any charges. More inclusive policies and prevention strategies are required to address the socio-political and legal context of sex work, which would create an environment for sustained reduction of HIV/AIDS risk among female sex workers.

FP-067

The Preliminary Study of the Core Value of Residents in Intensive Care Unit (ICU)- the Influence on Hospital Moderating Effects

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Objective: ACGME indicates that to be a good doctor, one has to possess at least six core abilities. However, professionalism is the key of the quality of patient care. The purpose of this study is to investigate the cross level relationship between individual (resident) and group (hospital) level.
Methods: A total of 182 valid questionnaires from 28 hospitals were return. Furthermore, the hospital constructional data were obtained from the Department of Health and Taiwan Joint Commission on Hospital Accreditation. Hierarchical Linear Modeling method was employed to analyze the data.
Results: The results showed that residents' professionalism in the third year is significantly superior to the first year. Different kinds hospitals moderate the relationship among the readmission rate 72 hours after transfer out of ICU (p=0.001), the average days of hospitalization, and residents' professionalism.
Conclusions: The longer residents' working year, the better their professionalism. However, the professionalism of residents who work in a medical center is better than those who work in a non-medical center. And, residents who work in a hospital with lower the readmission rate 72 hours after transfer out of ICU tend to have better professionalism than those who work in a hospital with higher the readmission rate 72 hours after transfer out of ICU. Moreover, residents who work in a hospital with lower average days of hospitalization, also have better professionalism than those who work in a hospital with higher average days of hospitalization.

FP-068

Disease Pattern, Level of Satisfaction and Perception on Ayurvedic Medical Care among Patients Seeking Treatment from Ayurveda Practitioners in a District of Sri Lanka

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Sri Lanka has a long history of providing ayurveda medical care. Information on disease profile of users or their satisfaction and perceptions on services are scarce. This research aimed to describe disease patterns of patients seeking treatment from ayurveda practitioners and to assess their satisfaction and perceptions on ayurvedic medical care. A cross-sectional study was conducted in randomly selected 16 ayurvedic medical clinics. Patients (n=395) seeking care were interviewed using a questionnaire. A majority were >60 years(50.9%), females(62.8%) in the 'low' income group(71.1%). Symptoms related to: musculoskeletal diseases(35.7%); respiratory diseases(13.2%); paralysis(7.3%); wheezing(6.8%), headache(6.3%) and fracture/dislocations(6%) were the main presentations. 76.4% respondents had visited a western medical practitioner before. Mean duration of the presenting complaint was 15.7 months(± 27.2). A majority of patients were satisfied with specified facilities available at clinics (>70%), waiting time (85.5%) and cost of treatment (76.2%). Main reason for choosing ayurveda medicine for the current illness were their perceptions that permanent cure cannot be achieved with western medicines(51.6%). Majority perceived that ayurvedic medicines were less costly (66.8%) and incurred less side effects (87.4%). Regarding perceptions on better treatment modality, a majority stated that ayurvedic medicine was better for fractures(83.1%), paralysis(78.6%) and asthma(64.6%) whereas western medicine was better for dog bite(77.2%), tuberculosis(76.8%), myocardial infarctions(74.8%) and high blood pressure(78.3%). Only few knew of availability of surgical(14.8%) and family planning methods(3.5%) in ayurveda. Study reveled important information on disease pattern and patient perceptions which may be used to improve both ayurvedic and western medical services in the country.

FP-069

Molecule of the Millennium; Taurine in Nutrition: From Energy Booster to Alleviation of Ageing

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Medicine and food have a common origin. A food can be regarded as 'functional' If it is satisfactorily able to demonstrate its beneficial effects on one or more target functions in the body thus improving the state of health and strengthening the well being and or participating in reduction of risk of diseases . Such nutriceulicals in broader term must remains as component of food rather than individually as capsule or in other forms. There is increasing evidences that sulfur amino acids (SAA) play an important metabolic and functional role in human health and decease prevention. It is further observed that SAA also provide elemental Sulfur require for growth and development, and in general, it is source of energy and nutrient needs of various life processes. Taurine has long been placed under such category. To add little more the best-known functional food until now is mother's milk of which taurine is component. It is possible and feasible to modulate target functions via food supplemented with such agents. Taurine supplemented food and formula have provided long range of beneficial effects, almost covering the entire life activities, from vision to brain and smoking to drinking. It has anti diabetic to anti ageing properties .Taurine is also involved in verities of ways to improve the quality of life to make it more happier and healthier .Some of the taurine analogues also exhibit similarly. Hence taurine such potential require further extension and enlargement but with logistic support.

FP-070

Professionalization, Differentiation and Integration of Chinese Medicine in Taiwan

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Objectives: By envisioning the integration of validated indigenous medicine into mainstream health system the WHO endorses the member states to intensify the training in traditional medicine for different categories of health personnel. Therefore the professionalization process of Chinese Medicine with its integration in the health care system of Taiwan is the object of analysis. Methods: In accordance with the concept of a New Medical Pluralism the view is directed to the conflict over jurisdiction within the system of the medical professions involving the key players – state, TCM-practitioners and biomedical profession. This research is based on an analysis consisting of contemporary government files and lots of literature from TCM-physicians, TCM-supporters and –opponents. In-depth expert interviews give a deeper insight of TCM-development in Taiwan. Results: An academic education, a broad institutionalization and standardization were the preconditions that in the 1990's TCM-doctors showed important attributes of a profession and were mostly integrated into the healthcare system. The partial and structural inclusion of TCM into the NHI strengthened its position within the healthcare system. But as the result of the enduring scientification the content and the identity of TCM are becoming more and more indistinct. Conclusion: This development is leading to the establishment of a differentiated New Medical Pluralism in Taiwan. Traditional medicine is partially integrated in the health care system with commitment to scientification and standardization and partially excluded due to non-academic education of healers.

FP-071

The Research for Relation to among Spirituality and Psychological and Physical More 80 Years Old Longevities

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Purpose: It is said that aging process, all elderly experience, of physical and socio-economical changes not only affects their physical and mental aspects but also have influence on their spirituality. In other words, it is said that physical, psychological, and sociological health conditions are influenced to "quest for self-existence and meaning" and connected to work process for pursuing spirituality, and this process helps improves accepting their aging, happiness, and even enhance morale of their self-realization. However, recent research on elderly in Japan is mainly related to genetics or physical condition and diet, and little research focusing on spirituality has been reported in Japan so far. We assume that research dealing with spirituality of elderly is meaningful especially when we consider their support for building up their health. Purpose of this study was to focus on elderly spirituality, which is specialized feature can be found in elderly, and built a model which includes their physical, psychological, and social aspects. Subjects and Method: We targeted elderly above more 80 years old from "A" ward which preserves traditional culture. This method was conducted by visiting their homes and collect data. For analyzation, we used specified Japanese spirituality scale as an independent variable and used SUBI (Subjective Well being Inventory) by WHO, activity daily life efficacy scale and an original scale for Okinawa traditional psycho-spiritual as dependent variable. It is expected that there is a relationships between well-being and spirituality. We will report statistical data on that day.

FP-072

Comparison of Patient Characteristics in Acute Spinal Trauma Caused By Traffic Accidents Versus Falls in Northern Taiwan

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Background: Traffic accidents and falls are the major causes of spinal trauma, which result in serious personal and social loss. Therefore, an investigation about relationship between causes and patients' characteristics can be important.
Methods: 681 spinal trauma patients were compared for differences and discussed the effects of age stratification of the differences.
Results: Significant differences were observed between falls and traffic accidents in the variables, included age ($p<0.000$), associated injuries ($p<0.000$), pattern of neurologic deficits ($p=0.040$), and location of spinal trauma ($p<0.000$). After age stratification, significant difference was noted in neurologic deficits ($p=0.032$) in prime-aged group (25-44 year-old).
Conclusions: Although traffic accidents caused spinal trauma mostly in prime-aged group, falls caused more neurologic deficits. Falls caused more spinal trauma in elders (>65 year-old) but do not cause more neurologic deficits. To decrease economical cost of neurologic deficits, preventions should be targeted to youngers from falls and elders from both causes.

FP-073

Establishment of Injury Surveillance System in Danang, Vietnam

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Safe DanangTM is a community based child injury prevention project which is implementing in Danang city, Vietnam. Besides interventions at Home, school and community, a Injury Surveillance System (ISS) was developed to strengthen the injury and health surveillance system in Danang and measure the impact and effectiveness of all intervention programs. A sample of 12/56 communes was randomly selected. All households having children less than 12 years old were interviewed on injury incidence and death (1 year recall) and on household hazard and risk factors. A total of 20461 households were interviewed, with 2392 non-fatal injury incidents and 46 fatal cases. Most non-fatal cases commonly took places in boulevard/street (39%), home (25%) and lane/walkway (10%). The leading three causes of injury were transport injury (44%), fall (28%) and sharp object injury (7%). The top three natures of injury were lacerated wound (30.9%), fractured bone (28.6%) and blunt trauma (10.3%). Most patients got injured while traveling (41.9%), working (13.7%) and playing sport outdoor (10.7%). Demographic and social variables permit further analysis of injury. The data is analyzed to determine characteristics of injury and for further in-depth analysis on different purposes. There are various practical difficulties in establishing and maintaining the system and these will be of use in developing ISS systems elsewhere as will sample selection and the experience rolling out ongoing surveillance.

FP-074

The Current Situation of Child Jockeys' Health and Safety in Mongolia

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Introduction: Horse racing, as a manly sport, is the manifestation of this strong tradition in Mongolia where children are the masters of the race. Each year, 80-120 thousand horse trainers train horses and 60-80 thousand children participate in races. Accidents and injuries of jockeys have been increasing. According to the reports of horse race organizers during 1996-2006, a total of 206 children fell from horses, and of these 82 children received light injures, 64 children serious injuries and 17 children died. The goal of this study was to assess the injuries of child jockeys and to identify adequate prevention from child injuries.
Methods: Data were collected from the reports of horse race organizers in 2006-2008. The data were analyzed with descriptive methods. Results A total of 932 children were hospitalized due to horse injuries in 2003-2005. Forthy percent of the injured cases were to arms and limbs, 29,8% to scalp and 24,1% were musculoskelatal injuries. Many less serious injuries were not registrated and notified. Horse race organizers considered that the causes of injury were due to miss-management, weather conditions, lack of child skills, the attitude of the horse and the duration of the child's horse riding. Sixty percent of the jockeys did not have accident insurance. Jockeys do not use personal protective equipment (PPE) during the horse races. This is because of the lack of a PPE standard and information and the high cost. There is a need to develop

FP-075

Analysis of Gender Differences among Victims of Domestic Violence

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Purpose: The aim of this study is to analyze multiple issues of different genders in victims suffering from domestic violence.
Methods: This study is a retrospective cohort study from January 01, 2007 to December 31, 2008. All victims of domestic violence visited emergency department of a university medical center.
Results: A total of 866 patients are enrolled in the study; 190 male victims and 676 female victims. Age is an important factor of different genders victims in domestic violence. Majority of female victims are localized between ages of 18 to 65 years old. There are more male victims then female victims in the age groups of less than 18 years and greater than 65 years,. Men are the dominant perpetrators of all domestic violence. The relationship between female victim and the perpetrator is mostly intimate partner. Parents and siblings account dominant perpetrators of the male victims. In cases of child/teenager abuse and senior abuse, there are more male victims. The recidivism rate of male victim is less then female victims.
Conclusion: The main difference between the genders in victims of domestic violence lies in the distribution of age. Researchers have concentrated mostly on the females being victims of domestic violence. The steady increase of male domestic violence victims every year exhibits the lack of focus on the importance placed upon male victims.

FP-076

Personnel Development Programs for Regional Health Risk Management Staff in Japan

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Objectives: In Japan, training for public health workers has been provided by the central government, prefectural governments and so on. This study was undertaken to identify open issues related to personnel development for regional health risk management workers.
Methods: The study involved a questionnaire survey, included questions about training of health risk management for staff members, planned and implemented by prefectural institutions involved in health risk management (hereinafter “in-house training”) provided in 2007 and the health risk managing competency expected to be acquired by staff members through that training (hereinafter “expected competency”). Subjects were the directors of 517 public health centers and 79 regional public health institutions across Japan.
Results: Response rate was 62.9%. The median of in-house training provided per institution was 2, training pertained most frequently to infections (28.4%). When asked about the expected competency, the most frequent answer was “knowledge and skills needed to estimate the impact of an incident” (48.7%), and relatively infrequent answers were capability to “summarize a series of countermeasures into records or scientific paper”(7.2%), “devise and implement a regional health risk management plan” (8.5%) and “collect sufficient information for estimation of impact” (12.0%).
Discussion and Conclusion: In-house training did not appear to be sufficient for facilitating acquisition of high-level knowledge/skill or the types of competency requiring relatively long-term training. It was thought that the role of us in providing high-level and sufficiently long-lasting programs in order to elevate the quality of personnel development related to regional health risk management systems across Japan.

FP-077

Unintentional Poisoning Mortality Trends by Sex, Age, and Cause in Taiwan

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Recently, melamine a compound illegally used in cheap baby formula caused panic in Taiwan, while many unintentional poisonings are caused by reasons other than food poisoning. Pesticide poisoning and drug poisoning are commonly seen in Taiwan, where in 2007, 324 deaths were caused by unintentional poisoning, an average of almost one death per day. To understand the types of unintentional poisoning, developing prevention methods for high-risk populations is quite critical. Data was obtained from the Death Certification data file provided by the Department of Health from 1986 to 2007. There were 12,916 fatal cases of unintentional poisoning occurred in Taiwan during the past 22 years, involving more men (68.7%) than women (31.3%). Most deaths occurred in the 25-29 years (12.5%). Pesticides and drugs were two dominant poisoning agents (38.3% and 33.7%), followed by alcohol (7.3%). Showing a tendency of decrease by sex, age, and type, the mortality rate of unintentional poisoning was 2.37/100,000 (males 3.66/100,000; female 1.75/100,000), and the age preference was 80-84 years. Pesticide poisoning caused the highest mortality rate (an average of 1.04/100,000) which decreased the largest during the past 22 years (from 1.99 to 0.11), while drug poisoning, in second place, overtook pesticide poisoning, and become the first leading cause of death since 1999. This finding suggests that government should focus on male aged 30-34 years to develop preventive programs about drug safety.

FP-078

Mortality Trends of Submersion and Suffocation in Taiwan

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Fatal accidents caused by submersion and suffocation, such as drowned at the beach or in the river and suffocated eating jelly or rice dumplings, were frequent. In order to understand the epidemiology of these fatal cases, this study analyzed mortality data from

Department of Heath between 1986 and 2007. During 22 years, there were 30867 fatal cases of submersion and suffocation in Taiwan, and involved more men (73%) than woman (23%). Children aged 1-4 years (N=2493, 8.3%), under 1 years (N=2408, 7.8%) and 15-19 years (N=2318, 7.5%) were high risk age groups. Submersion (74%) was the leading causes of these fatal cases, followed by suffocation of foreign bodies (10.6%) and food (8.9%). Showing a tendency of decrease by sex, age and types, the mortality rate of submersion and suffocation was 3.64/100,000 (males 9.3/10,000; female 3.6/100,000), and the age preference was over 85 years (3.4/100,000). The highest mortality rate was in submersion (an average of 4.95/100,000), which rate decreased largest during 22 years (from7.9 to 2.2), the aged preference were 1-4 years and over 75 years. Suffocation by foreign bodies overtook that by food and became the second leading cause of death since 1998. The aged preference was under 1 year and over 80 years. This finding suggests that government should enhance the submersion prevention programs for people who aged 1-4 years and over 75 years in the future.

FP-079

Method-Specific Suicide Rates in Kaoshiung City, 1994-2006

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Background Method-specific suicide trends varied across countries, and studies of the trends in different countries can contribute to the understanding of the epidemiology of suicide. The purpose of this study was to examine the changes in suicide trends by sex, age and method in the years 1994 to 2006 in Kaoshiung City. Methods Mortality data files of suicide and undetermined deaths for the years 1994–2006 were obtained for analyses. Age-, sex- and method-specific suicide rates were calculated by seven age groups (0-14, 15-24, 25-44, 45-64, 65-74, 75-84 and ≧85 years old) and five suicide methods (solids/liquids poisoning, other gases poisoning, hanging, jumping, and others). Results Both sexes experienced upward trends from 1994 to 1999, and then an upward trend since 2000. People aged 85 years and above had the highest suicide rates throughout the study periods. However, females aged 25–34 years and males aged 35–54 years experienced the steepest increasing trends. As to suicide methods, an annual increase, since 1994, of people jumping from heights to commit suicide, and a marked increase, since 1999, of people completing suicide by poisoning with other gases (mainly charcoal-burning) were observed. Conclusion Suicide by measure of charcoal-burning and jumping from heights has become a serious public health problem in Kaoshiung City. Preventive measures to curb these increasing trends are urgently needed.

FP-080

Gender Differences in Types of Injuries at Different Age Levels

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Purpose: This study is to analyze gender differences for all types of injuries in different age groups.
Methods: Injury data of Neihu District of Taipei City were drawn out from injury surveillance system of Taiwanese Injury Prevention and Safety Promotion Association. A total of 16013 cases registered during the period of January 1, 2005 to December 31, 2008.
Results: In general, age groups of 15-24 years and over 65 years have higher injury rate; and over all gender ratio of male to female is 1.43:1. The gender difference is affected by age levels and types of injuries. For intentional injuries, females are the main victims of domestic violence ,whereas males are usually injured from homicide and infliction by other persons. As to unintentional injuries, more males than females were seen for most of types of injuries except for injuries from animals and plants and poisoning. In traffic accident, driver victims are mostly males and passenger victims are mostly females. At age 45 or above, more females suffered from falls than males. Man tend to be involved in human caused unintentional injuries more than women by 2.32 times.
Conclusion: Gender difference varies according to types of injuries and age levels. We must put gender, age, and situation into consideration when planning an injury prevention program. Preventive tactic should be evaluated with more profound data analysis to show its effectiveness.

FP-081

Association between Obesity and Low Back Pain among Taiwanese Adults

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Objective: To examine the association between low back pain (LBP) and obesity.
Methods: This was a retrospective cohort study. Data from two sources were used: the 2001 National Health Interview Survey (NHIS) data and the 2002-2004 Nation Health Insurance (NHI) claim data. Our sample consisted of 12,862 adults who were aged 18 years or older in 2001 and gave consent to the linkage of their survey data with corresponding NHI claims data. We defined "obesity" according to the WHO-Asia Pacific categories of Body Mass Index (BMI in kg/m2). Cox's proportional hazards regression was used to identify factors associated with LBP.

Results: Being overweight or obese was associated with a higher risk of LBP (P<0.01). Relative to normal weight adults, the HR of injury were 1.20 (95% CI: 1.09-1.31) for overweight adults, 1.17 (95% CI: 1.07-1.28) for obese class I adults and 1.28(95% CI: 1.08-1.52) for obese class II adults.
Conclusions: Persons having a BMI equal to or higher than 30 have a higher risk of LBP than other groups. Policy interventions should be taken to decrease such inequality and more research is required to identify aids and services that can effectively help people prevent excess risks of having LBP.

FP-082

The Study of Relationships between Perception of Patient Safety Culture and Morale of Nursing Staff

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Objectives: Nurse is the major work force at healthcare industry. The attitude and perception of patient safety is key to patient safety. Relationship between perception of patient safety culture and nursing moral has not been examined. The aim of the study was to explore the relationships between patient safety culture and morale, and further to identify predictors of nursing morale.
Methods: A cross-sectional study design was conducted for this study. Two instruments were used. One is Chinese version of patient safety culture which was originated developed by Agency for Health Care Research and Quality (AHRQ); and another is moral questionnaire which have been validated in many studies. Data were collected from 6 acute general hospitals at southern Taiwan. In total, 923 nurses completed the study, represented 78% response rate. Correlation and multiple linear regressions were performed by SPSS for Window. Results: The value of Cronbach's α of patient safety culture and moral was 0.894, and 0.927 respectively. The correlation coefficient between three dimensions of patient safety (organization level, unit level and outcome) and two dimensions of morale (satisfaction and recognition of working environment) were range from 0.43 to 0.53 (p>0.001). While controlling for demographic variables, year at position, frequency of contact with patients, and three dimensions of safety were significant associated with morale score.
Implications: It is suggested that nursing morale can be enhanced by patient safety culture. Nursing directors need to develop strategy to increase better understanding of patient safety culture.

FP-083

Socio-Economic Determinants of Menstrual Regulation Acceptors in Bangladesh: A Study at Mohammadpur Fertility Services and Training Centre

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Menstrual Regulation (MR) services are available in Government's family planning program as a family planning method though induced abortion is illegal unless for clinical reasons. Several studies have been carried out to evaluate reported abortion, estimate trend of induced abortion, role of abortion to fertility etc. in different part of Bangladesh, particularly in Matlab area. But limited study has been carried out to understand the socio-economic condition and factors compelling women to take MR services in Bangladesh. This study focuses on the socio-economic conditions and factors compelling women to receive MR services at Mohammadpur fertility services and training centre (MFSTC), Dhaka, Bangladesh. Education, income, employment status, age at marriage, age at first pregnancy, number of living children, and role of husband in decision process have been found important determinants to MR in Bangladesh. Though education level of higher secondary and above, the percentage of MR service receiving patient is found significantly low. Most of the patients are with no income and percentage of women with relatively smaller income is very low. Lower age at marriage and age at first pregnancy are found as an important cause of MR in the centre (Please make it clear what do u want to say). Though MR is a highly personal decision, husband and other family member plays an important role in the decision making process.

FP-084

Dietary Habits of a Group of Suburban Adolescent School Children in Sri Lanka

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Introduction: Adolescence is a period of developing varying patterns of eating independent of the family, with behaviours such as skipping meals, taking snacks, trying unconventional food, consuming excessive amounts of fast foods and artificial soft drinks.
Objectives: To describe the dietary pattern of sub urban adolescents in Sri Lanka.
Methodology: A descriptive cross sectional study was carried out among grade eleven school children (mean age 16.1, SD =0.4) in public schools in the Kalutara Medical Officer of Heath area. A food frequency questionnaire with a 7 day recall, and a self administered questionnaire was used to study 639 students adopting a cluster sampling method with probability proportionate to size.
Results: Most of the students (93.9%) have consumed rice daily or more. Nearly 11% had not taken their breakfast, while only 4.4 % and 5.9 % had missed their lunch and dinner respectively. More than 93% of the

children usually have their lunch and dinner prepared at home while 52 % had breakfast from the bakery, canteen, and other places outside home. The reasons for missing main meals were not being hungry (65.6%) and not having time for a main meal (42.6%).
Four hundred and sixty (72%) of the students consumed at least one snack a day, the common snacks being confectionaries. Those avoiding meat, fish or eggs were 22%, 12.5%, 12.7% respectively, the reasons being religious beliefs and dislikes.
Conclusions: Missing main meals and consumption of snacks and eating away from home were observed among adolescent students.

FP-085

Under Nutrition at Two Years of Age among Children Born in the Year 2005 and Low Birth Weight in the Medical Officer of Health (MOH) Area, Medirigiriya, Sri Lanka

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Objective: To describe the association between weight gain during the first two years of life and low birth weight in children born in the year 2005 in the MOH area, Medirigiriya
Methods: A cross sectional comparative study was conducted in the MOH area, Medirigiriya, a rural, agricultural area situated in the North Central province of Sri Lanka. The data collection was done from September 1, 2008 to October 31, 2008. All children born in the year 2005 and residing in the study area were included in the study. Children with congenital or chronic disorders were excluded from the study. A pre-tested interviewer administered structured questionnaire was used in the data collection. Ethical clearance was obtained from the Ethical Review Committee of the Faculty of Medicine, University of Kelaniya. The data were entered into excel 2003 data sheet and analyzed using SPSS 15 statistical software.
Results: 1,062 children were included into the study. There were 552 (52%) males and 510 females (48%) whose age ranged from 32 months to 45 months. 228 (21.5%) were under weight. The prevalence of low birth weight was 34.2% among the underweight children compared to 14.3% for normal weight children and was statistically significant (p=0.000..) with the prevalence of underweight at 2 years of age.
Conclusions: This study highlights the association between low birth weight and under nutrition at later life in children and appropriate measures to reduce the prevalence of low birth weight should be taken.

FP-086

Child Abuse and Corporal Punishment as Perceived by Northern Thai People

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The objective was to study the perception of child abuse and corporal punishment among Northern Thai people. The community based participatory assessment was used as the research method. The participants were composed of children, parents, villagers, and community key leaders in one rural community. The qualitative data were generated through in-depth interviews and focus groups discussion. Content analysis was utilized as the method for analyzing data. The findings revealed that the practice of corporal punishment such as spanking and beating were not considered child abuse by the participants. Behaviors that participants denoted as child abuse were corporal punishment administered with a hot temper or from angry parents, corporal punishment given without reason or for every small mistake made by the child, and corporal punishment which causes significant injury or even death. The results showed that cultural beliefs have great impact on the participants' perception of corporal punishment of a child. The cultural beliefs were comprised of three main themes: the belief of parents' rights over the child, the value of the child's obedience as a way to pay back the debt of gratitude, and the proverb of "spare the rod spoils the child". These beliefs create a positive view towards harsh punishment as the most effective form of discipline, as the way to express love, and for the betterment of the child's future. The results outlined the implications for community health nursing and suggest culturally appropriate interventions regarding child protection for the quality of child's development.

FP-087

Zinc Dose, Insulin Growth Like Factor-1 (IGF-1) and Birth Weight in Malnourished Pregnant Women in Indonesia

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Pregnant women are one of vulnerable groups for malnutrition. Indonesia House hold survey (2001) reported 19.1% malnourished pregnant women risk to delivery low birth weight babies. This study aimed to investigate the effect of zinc supplementation on birth weight and to assess precise dose of zinc. Randomized double blind pre-post controlled design was conducted in Takalar district (2002). Malnourished pregnant women divided into three groups and received food supplement

(600-700 kcal) & protein (15-20 g) for three months regularly. Group A, received 40 mg, group B, 20 mg of zinc, and group C as a control (placebo). Mid arm circumference was assessed for nutritional status, Zinc, Hb and IGF-1 was taken for laboratory assessment before and after intervention. The relationship among variables was calculated with Pearson correlation and regression test. Study showed zinc, IGF-1 and Hb level were below normal; 90.6%, 11.4% and 70.7%, respectively. Intervention Zinc 40 mg, 20 mg and placebo showed increasing zinc level significantly (p=0.014) and there was a difference in IGF-1 between group. Prevalency of anemia was Reduced in group A, B. and C (38%, 60%, and 39%) respectively, however, ther is no differences of birth weight (3040g) Conlusion, supplementation of 20mg zinc has reduced anemia 60% and prevent Low Birth Weight babies.

FP-088

Factors Affecting Weight at Two Years of Age among Children Born in the Year 2005 in the Medical Officer of Health Area, Medirigiriya, Sri Lanka

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2. University of Peradeniya, Sri Lanka

Objective: To describe factors affecting weight gain during the first two years of life in children born in the year 2005 in the Medical Officer of Health area, Medirigiriya
Methods: A cross sectional comparative study was conducted in the MOH area, Medirigiriya, a rural, agricultural area situated in the North Central province of Sri Lanka. The data collection was done from September 1, 2008 to October 31, 2008. All children born in the year 2005 and residing in the study area were included in the study. Children with congenital or chronic disorders were excluded from the study. A pre-tested interviewer administered structured questionnaire was used in the data collection. Ethical clearance was obtained from the Ethical Review Committee of the Faculty of Medicine, University of Kelaniya. The data were entered into excel 2003 data sheet and analyzed using SPSS 15 statistical software.
Results: 1,062 children were included in the study. There were 552 (52%) males and 510 females (48%) whose age ranged from 32 months to 45 months. 228 (21.5%) were under weight. The maternal knowledge on breast feeding, complementary feeding and feeding during second year showed statistically significant (p=0.000..) association with the prevalence of underweight at 2 years age. Mother's level of education ($p<0.05$) and literacy of the mother and the father ($p<0.01$) were statistically significant with the prevalence of underweight of females.
Conclusions: This study highlights the importance of mother's education in reducing underweight in children.

FP-089

The Pattern and Association between Liver Disease and Complications in Pregnancy and Delivery

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Maternal mortality during pregnancy and puerperium, especially due to hemorrhage in hospital conditions has decreased in recent years in Mongolia. But mortality due to liver diseases hemorrhage was high in Second maternity home during the last 3 years. There were 220 pregnant women diagnosed with liver diseases during the 2006-2008 in Second maternity home of Ulaanbaatar. The women, who delivered with liver diseases, occur in 3% of all delivered women in this hospital. Maternal mortality rate was 1382.5 per 100000 live births among liver diseases pregnant women. 10.0 percent were delivered early by induction and abortion, 1.8 percent were miscarriege because of liver dysfunction among liver diseases 220 pregnant women. Although 19.5 percent of all women had hepatitis viruses B and C, others didn't tested for the Viruses. A total of 63.6 percent of all liver diseases pregnant women had history of Hepatitis. There was association between complications of pregnancy, delivery and liver diseases. It means there is a high probability complications of pregnancy and delivery where they have a liver disesase. Moreover, there was slight positive relationship with type of delivery and complications of labor of women with liver diseases. There is direct correlation between maternal mortality and women with liver disorders. Conclusion Early diagnosis for liver diseases during the pregnancy and improvement of antenatal care are essential for maternal survival.

FP-090

Relationship between Food Consumption and Hemoglobin in Pregnant Women at South Sulawesi, Indonesia

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Food consumption pattern is known as a determinant factor for nutritional problems among pregnant mothers. This study was intended to assess food consumption and its relationship to anemia in Maros Districts, Indonesia. This study was conducted in two sub-districts and pregnant mothers was randomly selected (n=200) and proportionally from both districts. Data was collected by train field workers including measurement of hemoglobin, height and weight, 24-hour recall and food frequency questionnaire. Multivariate analyses were performed to see the relationship between food consumption and anemia. It showed that anemia

prevalence was 41% whereas mostly in mild and moderate levels (44% and 55% respectively). The most common pattern of food consumption was rice, fish, and some vegetables. However, vegetables and fruit mostly consumed only 3-6 time a week. Energy and protein intakes were only 59% to 72% RDA or 1300kcal and 48gr respectively. Most vitamin was consumed only around 40% except for vitamin A (76%, 605RE), folic acid (195%, 1170ug), and Vitamin B12 (142%, 3,7ug). However, iron and zinc intakes were only 6.1gr (17.5%RDA) and 5.9gr (44%RDA), respectively. Multivariate analyses showed that education duration of mothers, nutritional status, iron tablet intakes, vitamin C, and B6 consumption were significantly related to anemia of pregnant mothers in the study and accounted for 24% (p

FP-091

The Risk Factors of Gestational Diabetes (GDM) and Development of Subsequent Type 2 Diabetes Mellitus at Early Postpartum

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Background & Purpose: Women with gestational diabetes mellitus (GDM) will develop diabetes potentially, aim of the study will determine the incidence and the risk factors for predicting the development of type 2 diabetes.
Methods: A prospective study of GDM women were adopted in a medical center and it's branches during Apr. 2006 to Dec. 2007. The following data were collected before delivery: age; pre-pregnancy BMI; family history of diabetes mellitus; glycemic parameters of 50-g 1-h glucose challenge test(GCT) and 100-g 3-h oral glucose tolerance test(OGTT); ac and pc glycemic level at 32 weeks gestation. The following data were collected at 8 weeks postpartum: new born body weight; waist circumstance; BMI; blood pressure; ac and pc glycemic level after 75g OGTT; HbA1c.
Results: 94 participants with GDM were analyzed. 6.4% were developed diabetes. The following data were significant between diabetes and non diabetes group: 50g GCT; 1, 2, 3 hour after 100g OGTT; fasting glucose level at 32 weeks gestation; postpartum BMI; HbA1c. Pregnancy factors predictive for the development of diabetes included elevated 50g GCT and glucose level on 2 and 3 hour after 100g OGTT.
Conclusion: The early postpartum diabetes in GDM women was 6.4 %, and 50g GCT; glucose level on 2 and 3 hour after 100g OGTT were risk factors for detecting early postpartum diabetes. Those findings will useful for mentioned GDM women to maintain a healthy life style.

FP-092

Food Pattern and Dietary Intake of Pregnant Women in Maros District, South Sulawesi, Indonesia

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This study was intended to assess food pattern and nutrition asupan of pregnant women. This was an observational study in pregnant women (n=200) who selected using proportional stratified random sampling in two Puskesmas areas (urban and rural). Data was collected by trained field workers using 24-hours food recall and food frequency questionnairre methods. Data was analyzed using bivariate analyses and comparison between two areas was performed usign independent t-test. Results showed that rice was consumed every day by almost all subjects (95%) while fish consumed every day by 51% of subjects. In addition, meat, liver, and milk were never consumed by 36%, 64%, and 36% of subjects. Pregnant mothers consumed vegetable and fruits mostly 3-6 times a week such as green leave vegetables (73%), pepaya (46%), orange (49%), banana (65%) tomato (67%) and nuts (64%). Except for folic acid, vitamin B12, vitamin D and phosfor, most nutrients was consummed less than recommended (> 80% AKG). In addition, there were no significat difference of nutrion asupans between rural and urban areas except for vitamin E. We conclude that pregnant mother consumed lower than recommneded and in general no difference between rural and urban for dietary intake.

FP-094

A Comparison of Two Surveys (2004 and 2005) That Investigate the Situations and Related Factors of Families with Nurturing Problems, Including Child Abuse, That Require Ongoing Support

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Using the health questionnaire and results of the regular municipal health checkup for infants at 4 months, seven factors were extracted from data of A City's year-long survey (the 2004 Survey) of infants of that age group （n=2,104). In this study, similar research was carried out in order to confirm the accuracy of screening that had been done by A City for 4-month-old infants from October 2005(n=2,136). 1. In this survey of 2005, there was a group of 137 (6.4％) "families with nurturing problems." 26 families(1.2％)"abused child" were included. There was a significant in the percentage of these two groups,"families with nurturing problems" and "abused child," from those of the previous year's survey. 2. Of the seven factors in the 2004 survey that were related to the 2005 survey, four of the factors: "nurturing anxiety and feelings of burden;" "required monitoring following medical examination results;" "not playing

with or taking the child outside;" and "lack of spousal consultation and cooperation" exhibited a significant relationship. 3. In the 2005 survey, the average number of factors related to the group with "nurturing problems" was 2.2 for the "abuse" group, 1.8 for the "nurturing problems but no abuse" group and 1.3 for the "No problem" group, which was a significant difference. 4 It is believed that use of the regular heal

FP-095

A Pilot Study of the Influence of Growth Reference Charts on Breastfeeding Rates

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3. Women's Hospital of Zhejiang University, China

Objective: A pilot study of the influence of growth reference charts on breastfeeding rates.
Methodology: Breastfeeding is the foundation of infant nutrition and lifetime healthExclusive breastfeeding for the first six months of life for optimum growth and health. In Hangzhou, China 500 mothers were recruited at birth for a randomised control of the influence of the type of growth chart on breastfeeding rates. The two growth charts used represented the CDC 2000 and the WHO 2006 references. A total of 537 mothers were included in the pilot study, 273 in the first group (heavier growth chart) and 264 in the second (lighter) group. Mothers were interviewed at 1, 6 weeks and 3, 4, 5 and 6 months. During these the visits the infants' weights were plotted on growth charts which the mothers kept.
Results: The mothers who had the heavier growth chart had lower rates of full breastfeeding than the mothers using the lighter (CDC2000) growth chart. At three months the full breastfeeding rates were 26% in the heavier chart group and 30% in the lighter group. This suggests that mothers who perceive that their infants are not growing adequately may introduce other foods to their infants earlier than other mothers.
Conclusion: It is important to understand if the type of growth chart used influences whether mothers fully breastfeed their infants. This pilot study suggests that breastfeeding rates are influenced by the type of growth chart used and a larger trial is required to confirm the results.

FP-096

Psychological Well Being and the Associated Factors of Primary Infertile Women in Sri Lanka

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Introduction: Primary infertility has a considerable impact on the psychological well-being of the female partner of a couple and studying of which would assist in providing better care for them. This study compared the psychological well being of primary infertile women with a group of fertile women and identified some demographic, treatment as well as infertility related marital and social factors associated with it.
Method: Psychological well-being of 177 primary infertile women identified in a community prevalence survey in the Colombo district, Western Province, Sri Lanka and 177 controls matched for age and duration of marriage was evaluated using the GHQ-30. A pre-tested questionnaire was used to obtain other related information. Odds ratios and logistic regression analysis was used to identify relationships among infertile women.
Results: A significantly higher proportion of primary infertile women (66.1 %; 95%CI 59.14-73.06) had psychological distress as compared to fertile women (15%; 95%CI 9.75-2-0.25) ($p<0.001$). After controlling for other variables, primary infertile women with a lower educational status (OR=55.34; 95%CI 15.23-201.06), poor marital communication (OR=3.45; 95%CI 1.22¬9.75), higher priority for having children (OR=4.18; 95%CI 1.25-13.82), previously investigated/treated for infertility (OR=39.11; 95%CI 8.25-185.41) or currently investigated/treated for infertility (OR=10.99; 95%CI 2.98-40.61) had a higher risk for being psychologically distressed.
Conclusions: Primary infertile women were at a higher risk of developing psychological distress as compared to fertile women. Lower education status, being previously or currently investigated/treated, placing a high importance of having children and poor marital communication were predictors of psychological distress among primary infertile women.

FP-097

Analysis of Association between Macroeconomic Indicators and Fertility Trends in Korea Using APC Model

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Background: The total fertility rate (TFR) of Korea has rapidly fallen since 2002, hitting the lowest 1.08 in 2005. Recently, a few Korean studies have discussed that considerable changes in economic conditions since the economic crisis and the inception of International Monetary Fund (IMF) from 1997 are mainly attributable to the delayed childbearing which has resulted in the sudden drop of TFR. This study aims to analyze the association between macroeconomic indicators and fertility trends in Korea from 1995 to 2005.
Methods: We utilize national birth record files from 1995 to 2005 obtained from Korean Statistical Information Service (KOSIS). By enumerating event by quarters in a year, we calculate quarterly birth rate for 11 years. Rates

are calculated separately by each one-year interval age groups in each year. Macroeconomic indicators (economy growth rate, consumer price index, and unemployment rate by age groups) are also quarterly calculated. Statistical analysis consisted of descriptive and Age-Period-Cohort model using HLM.
Results: 1. TFRs for first birth were affected by tempo-effect, while TFRs for second and above births were largely affected by quantum-effect. 2. Economy indices (unemployment rate and consumer price index variation rate) had a negative impact on both first and second and above births. However the economy growth rate had a positive effect on childbearing. 3. Macroeconomic indicators excercised independent influence on age, cohort and period.
Conclusion: These findings suggest that the government should intensify employment stability and support policy for reconciliation of work and family in order to encourage the childbearing.

FP-098

Follow Up Survey on Abnormal Menstrual Cycle of Nursing Students

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Objective: Nursing students are reported as high risk group of abnormal menstrual cycle. We investigated the prevalence of the abnormal menstrual cycle in nursing students and carried out follow up survey after 15-20 years later to clarify the prognosis of the abnormal menstrual cycle.
Subjects and methods: Subjects were 66 university nursing students aged 20-23 years old. The menstrual cycle of them were investigated by using menstrual cycle record of 12 months in 1985-1992 and they were reassessed in 2005.
Results and conclusion: The prevalence of the abnormal menstrual cycle of the nursing students was 27.3%. The abnormal menstrual cycle was improved in 13 cases out of 18 students after 15-20 years later. The results suggest that the abnormal menstrual cycle of young nursing students of twenties may improve along with maturity.

FP-099

The Mediating Effect of Cross-Cultural Adjustment on Workplace Social Capital and Individual's Psychological Distress among Taiwan's Foreign Workers

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Objectives: The impact of cross-cultural adjustment on individual's psychological health is an important issue to be concerned in the expatriate management. The workplace social capital can facilitate the adjustment of foreign workers when they are working in different countries. This study was designed to investigate the relationships between individual's workplace social capital, cross-cultural adjustment and perceived psychological distress among Taiwan's foreign workers. We also test whether cross-cultural adjustment plays a role of mediating effect on the relationship between workplace social capital and individual's psychological distress.
Methods: A total of 344 foreign workers from four countries including Thailand, Vietnam, Indonesian and Philippine in Kaohsiung, Taiwan were surveyed from April to June 2009. A structural self-reported measure, including questionnaires of workplace social capital, cross-cultural adjustment, and general health questionnaire was given to all participants.
Results: The perceived workplace social capital, cross-cultural adjustment and psychological distress of foreign workers varied substantially by nationalities. Individual's workplace social capital was positively associated with his /her cross-cultural adjustment and negatively associated with psychological distress. The cross-cultural adjustment of foreign workers was negatively associated with psychological distress. In hierarchical multiple regression analysis, our results showed that the cross-cultural adjustment had a completely mediating effect between individual's workplace social capital and psychological distress.
Conclusions: Our study demonstrated individual's cross-cultural adjustment mediated the relationship between workplace social capital and psychological health. To promote the psychological health of foreign workers in Taiwan, the important issues of workplace social capital and cross-cultural adjustment need to be concerned and worth further studied.

FP-100

Applying the Theory of Planned Behavior on Exploring the Substance Abuse Tendency in the Early Adolescence

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Based on the escalation theory of drug abuse, the abuser adopted the legal addictive substance in their early adolescence and then used the illicit substance later in their adulthood. These illicit additive substances not only hurt them physically and psychologically, but also induce criminal offenses. There are many researches revealing that the earlier the substance abuse prevention may decrease the drug adoption rate of the adolescents. For confirming the application of theory of planned behavior on adolescent's substance abuse, we select students in Mai-Liao for self-administration questionnaires, where belongs to the highest prevalence area of drug offenses in Yunlin county of middle Taiwan. After stratified, random, cluster sampling, 283 students of 5th-6th grade were enrolled. The collected data was treated by the structural equation model. The tests of

overall model fit and fit of internal structural model are well. The findings indicate that relative advantage, complexity, compatibility are dominant factors in explaining the attitude of substance abuse; the primary and secondary referent groups are dominant factors in explaining the subjective norm of substance abuse; and self-efficacy and convenience are dominant factors in explaining the perceived behavioral control. The results also indicate that the attitude, subjective norm and perceived behavioral control are dominant factors in explaining behavior tendency of adolescent's substance abuse. This study draws upon the theory of planned behavior as the theoretical basis and empirical findings for a pragmatic explanation of key factors affecting substance abuse in early adolescence.

FP-101

Depression and Diabetes: The Complicated Co-Morbidity

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Background: Among the non-communicable conditions afflicting the population, depression requires special attention due to high prevalence and co-occurrence with diabetes. It has high negative impact on health-related-outcomes and quality-of-life of diabetics. It has been considered as modifiable risk factor for diabetes control and management, and is amenable to cost effective treatment. Objective of the study was to identify the factors associated with depression among type 2 diabetics.
Methodology: This is a hospital based case control study with 300 subjects in 1:2 ratio. All consecutive patients attending the hospital were screened with nine-item patient health questionnaire to assess depression and a pretested structured interview schedule was administered to assess socio-economic, behavioral and diabetes specific factors. Bivariate and multiple logistic regression analyses were done using SPSS software.
Results: Risk factors identified in bivariate analysis were female sex, living alone, less than high school education, smokeless tobacco use, physical inactivity, poor social support, poor dietary adherence and poor glycemic control. However, multiple regression analysis indicated poor glycemic control [OR=6.32;(3.08-12.98)], poor social support system [OR=7.11;(3.52-14.35)], poor dietary adherence [OR=6.08;(3.04-12.13)] and smokeless tobacco use [OR=2.01;(1.03-4.23)] are significant predictors of depression.
Conclusion: Depression was significantly associated with modifiable risk factors like socio-behavioral and clinical factors. Hence a holistic approach for identification and rectification of risk factors by those who care for diabetics is the need of the hour for healthy living.

FP-102

Cultural Dimensions of Depression in Bangladesh: A Qualitative Study in Two Villages of Matlab, Bangladesh

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This article reports the results from a qualitative study conducted in two villages of Matlab. Participants with history of depressive episode were selected from a previous survey. A case vignette was used to elicit local terms for depression, the perceived causes, impact and treatments. Hardly anyone recognized the term Bishonnota (literal translation of depression) used in past surveys. Most thought the vignette was about Chinta Rog (Worry Illness). Majority spoke of somatic symptoms. When explored further, they mentioned sadness and psychological complaints. Men felt it affected them more while women felt the opposite. Most associated Chinta Rog with poverty and social issues with impact on marriage, work, and education. They attributed the cause to thoughts and emotions resulting from social causes. Commonly suggested treatments were more income, better relationships, and tablets. Former health providers were often the first choice for help-seeking.

FP-104

Stress in a Workplace in Mongolia

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Aim: The aim of the our study is to determine of immune system changes workers on their jobs/hospital, legal and commercial organizations/.
Method's: Level of stress of healthy peoples determined by questionnaire of Spielberg, in peripheral blood serum cortizol interleukin – 6 and tumor necrosing factor defined by the method of ELISA using monoclonal antibody's. Statistical analyses done by SPSS 10.0 for windows programme.
Result of study: Determined 21% of studied people had no stress; and 78% had stress; 47.6% with I degree, 18.1% with second degree, 13.2% with third degree. The average age of the people was 26-30+0.4; 42.2%, of them – male and 57.8% - female. 70 people with the second and third level of stress and 20 men with the 0 level stress were chosen for the immune test. The cortisol level in blood serum of people with stress has increased ($p<0.0001$) than the people who had no stress. It shows that IL-6 ($p<0.01$), TNF α($p<0.05$) in the peripheral blood serum of people with stress has increased than the people in the control group.
Conclusion: 1) It can be concluded that 78.9% of workers in hospital, legal and commercial organizations feel stress in their workplaces; 2) The content of cortisol in the peripheral blood serums have been increased during the stress; 3) Increase of IL-6, TNFα cytokine in

the peripheral blood serum can lead to change the function of the immune system of the body.

FP-105

Psychosocial Distress and Suicidal Risk Behavior among Chinese and Philippine Adolescents

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Objective: To determine the association of psychosocial distress and suicidal risk behavior among Chinese and Philippine adolescents.
Method: Global School-based Student Health Surveys conducted in China and the Philippines were used to identify the association of psychosocial distress indicators (sad/hopeless, loneliness, worry) and also health behaviors (substance use, physical fighting, being bullied, overweight, physical activity, sedentary activity) with suicidal risk behavior (contemplating attempting suicide or suicidal ideation, making a plan to attempt suicide). Subjects included 9,015 Chinese adolescents and 7,338 Philippine adolescents who participated in the GSHS. Logistic regression was used to determine these associations and identify specific psychosocial distress indicator and health behaviors correlates of adolescent suicidal behavior. Weighted percentages were calculated to determine the frequency of the suicidal risk behaviors.
Results: Chinese girls were more likely to report suicidal risk behavior than Chinese boys, while among Filipinos, boys were more likely than girls to have made a plan to attempt suicide and there was no difference in suicidal ideation. The logistic regression results showed that the strongest correlate (predictor) of suicidal risk behavior in both the Chinese and Filipino adolescents was having sad/hopeless feelings almost every day for two weeks or more in a row that an adolescent stopped doing their usual activities during the past 12 months. Several other psychosocial indicators and health behaviors were found to be significant correlates with suicidal risk behavior.
Conclusion: Public health professionals in China and the Philippines need to understand the risk factors associated with youth suicide contemplation.

FP-106

City Health Indicator: Awareness of the Suicide Death Rate in the Middle Age and the Aged Population within Wanhua District, Taipei

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The suicide death rate of the middle aged and the aged population is one of the 35 local health indices in Wanhua, Taipei. Indeed, suicide officially joined the top 10 causes of death in Taiwan in 1997. Suicide did not relinquish its position in the past decade, in which it ranked seventh and sixth respectively in Taipei and Wanhua in 2006. Clearly, suicide has gradually become a silent killer of the district residents. Surprisingly, the suicide rate of the aged population (above the age of 44) in Wanhua was as high as 60% in 2004 to 2006 compared to other age groups. Furthermore, the suicide death rate of the middle age and aged population in Taipei from 2004 to 2006 was 26.53(per 100,000), 27.43(per 100,000), and 26.23(per 100,000), while that of Wanhua was 14.21(per 100,000), 28.06(per 100,000), and 17.36(per 100,000), respectively. As a result, greater intervention into the mental health of the aged population is essential and necessary in Wanhua. There are two valid preventive strategies that are commonly recognized for suicide, early detection and treatment of depression and the control of the suicide intent. Consequently, mental health seminars and treatment related to depression are the major directions needed for health professionals and government to pursue.

FP-107

Factors Associated with the Prescription of Methylphenidate for Newly Diagnosed Attention Deficit Hyperactivity Disorder (ADHD) in Taiwan

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Objectives: Methylphenidate is one of psychostimulants commonly used to treat Attention-Deficit Hyperactivity Disorder (ADHD). Concerning a gradual increase of incident ADHD and higher abuse liability of methylphenidate, the purpose of this study is to estimate the proportion of incident ADHD who received methylphenidate and associated predictors among young people in Taiwan.
Methods: On the basis of the National Health Insurance Research Database, we identified 10,153 incident ADHD cases (ICD-9: 314) with ages younger than 17 years in 2000. Chi-square test and Cox proportional-hazard regression were performed to compare the distribution and estimate the hazard ratio linking individual- and service provider-predictors for receiving Methylphenidate prescription, with stratified by prior history of mental disorders, defined by ICD-9 290-313 and 315-319.
Results: An estimated 17% of newly diagnosed ADHD had previously suffered from at least one mental disorders. Only 11% of non-comorbid incident ADHD received Methylphenidate prescription upon diagnoses, slightly lower than 15% in their comorbid counterparts. Individual-(e.g., age; aHR=3.1~7.0) and service provider- (e.g., level of medical institution; aHR=1.4~1.7) were significantly associated with methylphenidate prescription with the year of diagnosis. Adjusted hazard ratios of predictors in non-comorbid ADHD were generally greater than those in the comorbid peers.
Conclusions: Our findings revealed individual- and service provider-characteristics both influence the receiving of methylphenidate soon after ADHD was diagnosed, and possible comorbidity-related differences appear in the strength of association. This empirical

evidence should promote the understandings of current stimulant medication utilization among youngsters and may provide indications to the policies monitoring inappropriate clinical prescription practice.

FP-108

The Effect of Aromatherapy on Physical and Psychological Stresses among Nurses

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Objects: The purpose of this study was to evaluate the effects of aromatherapy in reducing physical and psychological stresses among nurses.
Methods: Fourteen nurses (46.1 ± 9.3 years old) who didn't have medication and had agreed to the informed consent are selected as a participant. During the 5-days period, participants were treated with aromatherapy using 2 ml of 5% tea tree (Melaleuca alternifolia) essential oil and subjective evaluation was conducted using questionnaire at before and after intervention. Outcome measures included, Athens Insomnia Scale (AIS) for sleep conduction, a questionnaire of general malaise, a Visual Analogue Scale (VAS) of physical and psychological symptoms, State-Trait Anxiety Inventory (STAI) and Center for Epidemiologic Studies Depression Scale (CES-D). The intervention was conducted early June, 2008.
Results: AIS score significantly decreased after interventions in following three items "Sleep induction", "Total sleep duration", "Total score". General malaise score significantly reduced after interventions in following four items "Headache", "Lassitude", "Stomachache", "Stress". The VAS score significantly decresed after interventions in following five items "Eagerness", "Mood", "Feeling", "Fatigue", "Concentration". The state and trait anxiety scores and CES-D score significantly decreased after interventions.
Conclusion: Aromatherapy could be useful for nurses to improve their physical and psychological stresses by helping enhance their recognition of stress management and effectively relieving their stress using essential oil.

FP-109

Role of Culture in Help-Seeking Behaviour and Preferences for Mental Health Services

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There are significant cultural variations in how people recognize, explain, experience and relate to mental health problems, patients' willingness and preference in help-seeking. A household survey via semi-structured interview with 587 adults aged above 18 years (mean age=33.90, SD=12.13 years, 90% response rate) was conducted in a culturally rich country – Malaysia. The study aimed at investigating the general public's willingness to seek help for mental health related issues and their preferred mental health services. The results indicated that respondents' ethnicity influenced help-seeking decisions (OR=0.569, p=.032). Close to 75% of the respondents were positive towards help seeking, with general practitioners being most commonly mentioned (50%), and psychiatrists (9%) and psychologists (<1%) being the least mentioned sources of help. Approximately 12% of respondents, of which majority were Malays and rural residents, have indicated that they will also seek help from traditional healers. Language and education level may have been the barriers for the acknowledgment of help-seeking needs and where to seek help as many respondents have little knowledge about what psychiatrists or psychologists do. Among respondents who were doubtful about help-seeking, many did not know where to seek help and would not like people to know about their conditions due to the fear of being stigmatized. In conclusion, cultural values should be taken into consideration to facilitate public education and mental health promotions.

FP-110

The Inpatient Utilization of Severely Chronic Psychiatric Patients

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Background:''Deinstitutionalization'' has become the major direction in care of psychiatric patients. Do psychiatric patients obtain proper care in Taiwan?
Objectives: To explore the inpatient utilization of severely chronic psychiatric patients in Taiwan.
Method: A historical cohort method is adopted to conduct the study. After identification of the chronic psychiatric patients from the files of registry for catastrophic illness patients (HV) in 2005, the information will connect with the census registry and databases of the Bureau of National Health Insurance (BNHI) in 2006. The logistic regression and multiple regression were used to analysis the utilization of inpatient in 2006.
Results: The population was 217,682 in 2005, and patients with the schizophrenia disorders, affective psychoses and the senile and presenile organic psychotic conditions were most of all (87.18%). The hospitalized utilization rate of the schizophrenia disorders, affective psychoses and the senile and presenile organic psychotic patients were 29.51%, 23.52% and 25.51%. The hospitalized utilization rate of all was 26.37%. For these types of patients, the total expenditure were $6,500,000,000, $2,000,000,000, $1,600,000,000, and the acute LOS were 60.64 days, 37.83 days, 39.44 days, the chronic LOS were 236.94 days, 140.59 days, 112.49 days.

Conclusion: The LOS of severely chronic psychiatric patients, especially the schizophrenia disorders was higher then other countries. We suggested that develop the case management and community care to result in reduced the social hospitalization.

FP-111

Effect of Voluntariness and Gender Difference on Psychological Wellbeing of Older Adults: Korean Longitudinal Ageing Studies

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Background: Although several studies have investigated the relationship between retirement and mental health, little has examined the influence of voluntariness and gender difference on retirement consequences.
Method and materials: Two waves of data from Korean Longitudinal Study of Ageing are analyzed for 2,028 retirees aged 45 or above. For the analysis, the total sample is divided into four sub-groups (male voluntary retirees, male non-voluntary retirees, female voluntary retirees, and female non-voluntary retirees). The concept of voluntary retirement is clarified by reason of retirement. The dependant variable, psychological wellbeing is measured by CES-D10 where it is a index of depression.
Result: We fine that effect of voluntary retirement reduces worsening psychological wellbeing and that gender difference exists in retirement transition. For female voluntary retirees, retirement transition is associated with better psychological wellbeing whereas negative relationship between retirement transitions and psychological wellbeing is found for female voluntary retirees. In opposition to female retirees, male retirees undergo a mental healthy deterioration irrespective of voluntariness.
Conclusion: The findings suggest that retirement is an important factor in psychological wellbeing of older adults. Cessation of economic activities may bring loss of self control and identity, eventually leading to negative effect in psychological well being. It seems that impacts on mental health are harder for men than women in general. However, various contexts surrounding retirement transitions (voluntary retirement, gender differences, social participations, and assets) to understand the dynamics of the retirement transition and its relationship with psychological well-being should be considered.

FP-112

Study on the Effect of Aromatherapy on Physical and Mental Health among the Elderly with Dementia in Nursing Home

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Objective: In this rapid aging society, the problem of abuse to the elderly has become aggravated in Japan. Many cases of elder abuse are toward the elderly with dementia, and one of the reasons for this problem can be related to physical and mental exhaustion of care giver at home and medical staff at care work facility to behavioral and psychological symptoms of dementia (BPSD). A lot of interventional studies to the elderly with dementia have been reported, but little has been reported on effect of aromatherapy among the elderly using stress marker. This study was to evaluate the effect of aromatherapy on sleep condition, skin condition and BPSD among elderly with dementia using objective index and stress marker in saliva. Methods: A randomized controlled trial (RCT) study design was used. Thirty elderly with dementia at nursing home who had agreed to the informed consent were selected. The participants were divided by RCT into two groups: non intervention group (n = 15) and intervention group (n = 15). During the 14-days period, intervention group was asked to apply 2.0 ml essential oil which was specially mixed for the objects on their skin everyday before they go to bed. Objective evaluation was measured as follows. We measured salivary amylase to evaluate objective stress level before and after intervention. We also applied Clinical Dementia Rating and Dementia Behavior Disturbance Scale for BPSD for assessment. About this result, it is analyzing now, and the intervention effect will be announced on that day.

FP-113

Chinese NEO-PI-R in Taiwanese Adolescents

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Since there has been no research using the Revised NEO Personality Inventory (NEO-PI-R) with Taiwanese adolescents, the main objectives of this study were to examine the replicability of the five-factor model and establish a baseline profile of personality traits in this population. A total of 3,396 11th graders from the city of Kaohsiung, Taiwan completed the Chinese NEO-PI-R. Using principle component analysis with varimax rotation, the dimensions of personality in this Taiwanese adolescent sample clearly replicate the five-factor structure shown in adults and support the generalizability of the five-factor model in Chinese adolescents. Women had higher Neuroticism (3.9), Extraversion (2.9), and Agreeableness (5.1) scores than males. The gender differences reported in our study correspond to results from other cultures which suggest that the Chinese NEO-PI-R retains the psychometric properties of other language versions.

FP-114

The Choices of Providers for Outpatient Healthcare Services: The Role of Social Health Insurance

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Indonesian's healthcare is characterized by underutilized of the healthcare services. One of the ways to improve the demand is through health insurance. Responding to this potentially effective policy leads the Government to expand health insurance by enacting the National Social Security law in 2004. Understanding provider choice is therefore a key to address the broader policy question. This study aims to estimate a model of provider choice for outpatient in Indonesia with specific attention being paid to the role of social insurance. A total of 16485 individuals were obtained from the second wave of the Indonesian Family Life survey. A multinomial logit regression was applied to estimate provider choice for outpatient care in three provider alternatives (public, private and self-treatment). A policy simulation is reported as to how expanding insurance benefits could change the patterns of provider choice for outpatient healthcare services. The results confirms that individuals who are covered by civil-servant insurance are more likely to use public-providers, whilst the beneficiaries of private employees insurance are more likely to use private-ones compared with the uninsured. Less healthy, unmarried, wealthier and better educated individuals are more likely to choose private providers than public providers. Any efforts to improve access to health care through social health insurance will fail if policy-makers do not accommodate peoples' preferences for choosing healthcare providers. The likely changes in demand from public providers to private ones need to be considered in the insurance reform process, especially in devising premium policies and benefit packages.

FP-115

Prospective Analysis on Local Health Insurance of Bone Bolango Regency, Province of Gorontalo, Indonesia

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Background : The local government of Bone Bolango regency will provide every one in the community a health insurance (HI). The were 41,361 people (27,12%) who have not covered by available health insurance yet. Purpose : The study was aimed to find out amout of fund needed for this additional health insurane (local HI called JAMKESDA) Method : Analyzing needed cost by studying the existing health insurance packages. Then, calculating the number of fund provided by District Development Budget (called APBD) through JAMKESDA program Results : It is assumed that when these uncovered-health insurance people (41,361 people) are provided a health insurance through the so-called ASKESKIN (Central Government HI) cost Rp60.000 /person/year, the program needs Rp2.480.660.000 annually. When it is based on the Ascobat estimation which suggests a reasonable premium of Rp96.000/person/year, the program needs Rp3.970.656.000 annually. Likewise, when it is based on the premium provided by JPKM (previous Central Governmen HI) of Rp120.000/person/year, the program then needs Rp4.963.320.000. annualy. APBD of Bone Bolango regency of 2007-2008 is Rp513.320.915.730. From this amount, it is allocated about 2,34% (Rp11.998.668.025) for health program. As such, the government needs starting from Rp2.481.660.000. up to Rp4.963.320.000 annually (0.48% - 0.96% of the APBD) to cover the health insurance for those uncovered ones. Thus, AP

FP-116

Measuring Operational Performance and Time-Series Efficiency Change Model on Hospitals of Department of Health

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The study were 22 acute care affiliated hospitals of DOH, and. used Data Envelopment Analysis to evaluate the operational efficiency of year 2007 and analyze the efficiency of time-series from 2005 to 2007. The DEA model in this study used the number of hospital beds, doctors, nurses, medical staffs, and administrative staffs as inputs and used the number of inpatients, surgeries, and both outpatient and emergency visits as outputs. The empirical results of DEA found that when comparing the analytical results of efficiency of affiliated hospitals of DOH with external environments, the overall efficiency of affiliated hospitals of DOH in 2007 ranked the third, the technical performance was poor, and the scale efficiency ranked the second, especially the aspect of technical efficiency. When comparing the internal environments, the analytic results of overall efficiency of 12 hospitals was relatively high, the technical efficiency of 16 hospitals was relatively high, and the scale efficiency of 12 hospitals was relatively high, which was the same with that of overall efficiency. The analytical results of Super-Efficiency indicated that the performance of Taitung Hospital was the best. We found that the time-series efficiency except for Heng-chun Tourism Hospital, the efficiency of other 21 hospitals in 2007 improved much better than that in 2005. It could be concluded that the implementation of regional alliance among hospitals by resources sharing, techniques exchange, and joint marketing did improve the service quality and operational performance of hospitals, reduce the management costs, and achieve great performance in increasing competitiveness.

FP-117

The Effect of the "National Health Insurance Family Doctors Integrated Care" Program on Patients' Health Care Utilization

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Objectives: In 2003, Bureau of National Health Insurance (NHI) launched a "Family Doctors Integrated Care Plan" (FDICP) program to implement the heath care referring system, promote health, and control the health care resources. The purpose of this study was to evaluate the effect of FDICP program on members' health care utilization.
Methods: We adopted the NHI claim data from 2004 to 2006. Patients who joined FDICP for consecutive three years were recruited as the intervention group and those who never joined as the comparison group. By adjusting the propensity score, we controlled the selection bias due to the demographic discrepancies. The effectiveness of the FDICP program was evaluated by comparing the utilization of prevention services, medical care services, and health care expenditures between these two groups.
Results: Our results showed that the intervention group received significantly higher adult prevention services; however no significant difference was found on the children prevention services and Pap smear rates. In terms of outpatient utilization and expenditure, the intervention group was significantly higher than that of the comparison group. However, the results showed opposite direction in terms of hospitalization rates, length of stay, and admission expenditures. Finally, the FDICP program did not increase total health care expenditure.
Conclusions and Suggestions: The study shows that FDICP program is effective in promoting health care prevention and controlling hospitalization. We suggest that it is necessary to evaluate the long term effect on health care utilization and expenditure of the FDICP program.

FP-118

The Research of Off-Labeled Drug Use and Medication Type for Child Antibiotics under National Health Insurance in Taiwan

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Background: In Taiwan, antibiotics abuse has caused serious problems, such as drug resistance, and the child prescriptions have written out easily. Therefore, the study is focusing on medication type and off-labeled drug use that child antibiotics in pediatric outpatient services, and discussing the effective factors.
Method: All of data was extracted of systematic sampling datasets and contracted pharmacies files from the database of National Health Research Institutes from 2002 to 2005. This object of study patients are under 12 years old. The medication types are including expenses, medication items, medication categories, and administration duration. In addition to the off-labeled drug use, there are the further analysis of duplicated medication and drug-drug interaction.
Result: The prescriptions are 66,446 with antibiotics. The average of medications is 5.06 items per prescription with 1.03 items for antibiotics. The average of antibiotics medication is 1.02 categories. By the way, the average charge of medications has been cost NT$109.52 with NT$41.38 for antibiotics. The average duration of administration is 3.25 days. Off-labeled drug use is 33.33%; within the single prescription the rate of drug-drug interaction is 0.5%, and the rate of duplicated medication is 1%. The medication type and inappropriate prescription are different with prescription types, patient characters, doctor characters, and hospital characters.
Conclusion: The rate of child off-labeled drug use is too high in this research; therefore, the further study is necessary. And even though the rate of duplicated medication and drug-drug interaction are not high, but they are still risks of child medication security.

FP-119

Effect of Drug-Ceiling Policy on Physician Behavior: Example of Diabetic Medication in Taiwan

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Objective: The Bureau of National Health Insurance (BNHI) has shifted the responsibility of cost containment on drug expenditures from patient level to provider level by setting up a ceiling policy for medication. The aim of study is intended to examine impacts of medication ceiling policy on physician prescribing behaviors for diabetic medication and compare the trends of utilization for branded and generic drugs of Sulfonlureas.
Methods: Retrospective secondary analysis based on a random sample of the NHI claims data from 2000 to 2005. All the prescription orders of Sulfonylureas for inpatients and outpatients at different levels of providers were included. The utilization for medications before and after the implementation of policy was analyzed.
Results: Before the policy intervention year of 2005, both branded and generic drugs increased from 2000 to 2004. However, the utilization of branded-drug decreased significantly in quantity (-9.72%) and in expenditures (-8.42%) after the policy. On the other hand, the results of trend test indicated that the use of generic drugs had a significantly increasing trend ($P < 0.05$) at utilization and expenditure. The changing trends of

prescribing branded and generic drug were varied by different levels of hospitals.
Implications: Physician prescription patterns are affected by the BNHI drug-ceiling policy. Hospitals may change hospital drug formulary by replacing branded-drug with generic drug so that the impact of drug policy will be minimized. However, the quality of diabetic medication needs further cost effectiveness analysis.

FP-120

Exploration of Health Service Utilization by Diabetes Patients with Lower Extremity Amputation: A Longitudinal Study

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Diabetes mellitus can cause devastating complications including heart disease, blindness, kidney failure and gangrene in the leg and foot leading to amputation. This study aims to analyze health care expenditure and utilization of lower extremity amputation among patients with diabetes from claim data of Taiwanese National Health Insurance. Data from the National Health Insurance Academic database from 2000 to 2006 identified 16943 admissions for procedure by applying the definition of one of Ambulatory Care Sensitive Hospitalization to select cases. The total admissions are attributed to 4644 patients. The result shows approximately 2420 procedures performed each year. The mean age at the time receiving procedure is 67 years old. The mean age of male is lower than female age. 56% of patients are male. The estimated expenditure and average number of total hospital days each year is around 330 million and 62134 days respectively. The average expenditure and average length of stay per admission is 136058 NT dollars and 24.45 days respectively. The trend of number of procedures performed every month from 2000 to 2006 shows a seasonal variation. The peak number of procedure reaches highest from April to May every year. However, there is significant decrease in total number of procedure in 2006, even though the trend still emerge seasonal variation. The utilization of hospitalization for lower-extremity amputation among patients with diabetes may be preventable through efforts on disease management. The study findings provide descriptive information of the preventable hospitalization for the purpose of policy making.

FP-121

Prevalence of Knee Osteoarthritis among Adults Aged >50 Years in the District of Colombo

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Introduction: Data on prevalence of osteoarthritis (OA) derived from symptoms and signs are sparse with minimal information from developing countries.
Objective: To determine the prevalence of knee OA among adults aged >50 years in the district of Colombo.
Methodology: cross sectional study was conducted among 1750 adults >50 years using two stage stratified cluster sampling technique with probability proportionate to the size of the population in Colombo district. The interviewer administered Knee Osteoarthritis Diagnosis Instrument - Sinhala which was developed and validated from the American College Rheumatism clinical criteria, was used to diagnose knee OA.
Results: Crude prevalence of knee OA for Colombo district was 11.9% (95%CI:10.4–13.5) while the age & sex standardized prevalence was 11.3% (95%CI:11.2-11.4).
Sex specific prevalence rates of knee OA among males and females were 6% (95%CI:4.4-7.8) and 16.9% (95%CI:14.5-19.4). Females were at statistically significant 3.2 times higher risk compared to males (95%CI:2.3-4.5,p<0.000).
After adjustments for confounding with conditional logistic regression, persons with monthly income of ≥Rs2001 (OR=2.4,95%CI:1.2–4.8,p=0.013) and who are engaged in highly active jobs were at (OR=5.9,95%CI:2.1-15.9, p<0.00) higher risk of knee OA.
Conclusion: Prevalence was significantly higher among females, older age, high income group and highly active jobs.

FP-122

An Evaluation of an NCD Risk Reduction Intervention in Selected Villages

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Objective: To evaluate an NCD risk reduction intervention implemented at village level by a team of volunteers from the village.
Methods: The intervention was conducted in 40 randomly selected villages in seven districts and comprised Behavioural Change Communication sessions on reducing risk behaviour for NCD and creating an enabling environment for healthy life styles. Pre-post design, one year apart, was used. An interim assessment was also conducted. Outcomes assessed were changes in relevant knowledge, attitudes and practices at household level in a sample of households (n=1200) selected from 4-5 villages from each district. Adult female head of the family was selected as the informant. Data collectors were trained prior to each assessment and training included a practice data collection session in the field. Four supervisors were present in the field, supervising selection of households and data collection

Results: Knowledge on: risk factors for NCD ($p<0.001$); availability of screening tests ($p<0.05$); diet to prevent NCDs ($p<0.05$); healthy cooking methods ($p<0.05$) showed improvement. Most attitudinal statements showed change in a favourable direction ($p<0.05$). Physical exercise among males (15-60yrs) ($p=0.001$), frequency of consumption of green leaves ($p=0.02$) and fruits ($p<0.001$), and proportion of NCD patients on continuous medication ($p<0.001$) also showed improvement. Frequency of consumption of sweets ($p<0.05$), habit of snacking on sweets ($p<0.05$), taking soft drinks ($p<0.05$), rewarding ! children with sweets ($p<0.05$) had decreased.
Conclusion: The interventions on reducing risk behaviour for NCD showed success on several knowledge, attitude and behaviour measures.

FP-123

Prevalence of Overweight and Obesity in Sri Lankan Adults and Associated Socio-Demographic Factors

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Obesity may be the most serious public health issue in developed countries. The prevalence of obesity is on the rise at an alarming rate worldwide. Developing countries, particularly in South-East Asia (SA) has not being spared. The aim of the study was to determine the prevalence of overweight, obesity and abdominal obesity, and the underlying socio-demographic correlates among Sri Lankan adults. Data were from a randomly selected 4532 adults aged ≥18years from a national level study on diabetes and cardiovascular disease. Weight, height and waist circumference (WC) measured and body mass index (BMI) was calculated. The mean BMI and WC were 21.3Kg/m2, 22.2kg/m2 and 78.6cm and 76.8cm for males and females respectively. According to the proposed WHO cut-off values for Asians, the percentage of Sri Lankan adults in the overweight, obese and centrally obese categories were 25.9%, 9.7% and 29.2% respectively. Based on the cut-offs for Caucasians these were 17.3%, 3.8% and 11.9%. In addition, female sex, urban living, higher education, higher income and being in the middle age were shown to be significantly associated with risk factors for overweight and obesity in Sri Lankans ($p<0.001$). In conclusion, we documented relatively high prevalence of overweight and obesity, particularly, abdominal obesity among adult in Sri Lanka where is a middle income country. Urgent public level interventions are needed to control the problem at an early stage.

FP-124

Total Alcohol Advertising Ban and Consumption

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Alcohol advertising is misleading the public to think that alcoholic beverages are common drink and well-accepted by society. Moreover, advertisement promotes the attitudes of people in the society to think positively at the alcoholic drinks. Advertisement invites the non-drinkers to start drinking, and makes the regular drinkers to drink even more. Alcohol advertisement usually emphasizes on the desire to drink and overlooking - both personal and public - health risks. This leads to unsuccessful health promotion goal. Overall research evidences indicate that advertisement has direct influence on drinking behaviour.
The alcohol industry tries to portray positive images to be acceptable by society. At the same time, it tries to use advertising strategies to lure youth and teenagers to become its new customers, or victims. Even though it denies that advertisement is not used to deceive or attract youth and teenagers to drink, but its action indicates clearly that the industry spends enormous budget for advertisement and other promotional activities to do exactly that.
Advertising ban is a necessary and effective measure in preventing youth from deception and propaganda of alcohol industry. Providing correct health information or counter advertising is imperative in protecting public health.
Countries which enforce total alcohol advertising ban strictly, including all types of media and all kinds of alcoholic beverages (beer, wine, and spirits), is usually one of effective measures in reducing drinking volume and number of new drinkers. World Health Organization recommends total alcohol advertising ban as one of effective measures in tobacco and alcohol control.

FP-125

The Influence of Self Care and Family Effort to Relapse Stroke Patients

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Risk of relapse stroke is 12% at the first year after stroke attack and 7% at the next year. The Risk of the relapse stroke is because the patients not doing prevention such as; blood hypertension check, reduce smoking, reduce alcohol and proper diet. This research was observation research with case control study. The research did at Haji Hospital Surabaya city. Period of the research was September 2005 to May 2005. Sample of the research were stroke patients cared in the Haji hospital. Case group was relapse stroke amount 26 patients. Control group was patient that didn't have relapse stroke attack after 6 mount or more, amount 27 patients. The Result of the research showed the characteristic of the stroke patients were most elderly people, men and having high level of education, both relapse stroke and non relapse stroke. The stroke patients were also having low self car. The influence of self care to relapse stroke was not

significant (p=0,68). The family effort of the case group was low (65,4%), and control group was good (77,8%). The influence of family effort to case group was significant (p=0,02) The Conclusion of the research is that the family effort has important role to relapse stroke. The family need health promotion about how to take care the stroke patients, so that it can prevent relapse stroke.

FP-126

Correlation between Mortality Rates of the Cardiovascular Disease and Selected Socio-Economic Factors

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Since 1990 in Mongolia, the constitution of leading causes of mortality and morbidity was changed and begun by increase of prevalence of non-communicable diseases, and this situation was resulted from decrease of mortality and morbidity due to communicable diseases, transition from nomadic life style to city life style, and rapid development of urbanization and industrialization. Methods The survey objectives were to determine the correlation between prevalence and mortality of cardiovascular diseases and socio-economic factors. The study was designed as a descriptive study. Results There was reverse relationship between cardiovascular diseases mortality rate and number of persons per a physician ((R=-0.431, p=0.043). It means there is a high probability of cardiovascular diseases mortality rate in aimags where number of physicians are relatively low. Moreover, there was slight positive relationship with unemploymnet rate. There is direct correlation between GDP and cardiovascular disease mortality rate. There was moderate relationship between number of persons per a physician and cardiovascular disease mortality rate. Findings from the multifactoral model analysis confirmed that GDP (p=0.023, human development index (p=0.0214), number of persons per physician (p=0.008) are main indicators causing cardiovascular disease mortality rate Conclusion According to multifactor analysis, it is obvious that multifactor (p=0.001), GDP per person (0.023), human development index (0.0214) and number of people per physician (0.008) influence mortality caused by CVDs.

FP-127

Promoting Environmental Health in Suburban Communities through Waste Management Intervention by Sri Lankan Medical Undergraduates

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Introduction: Household waste management is a major public health problem in suburban communities in Sri Lanka.
Objective: To evaluate outcome on household practices and community services of a waste management intervention implemented by medical undergraduates during Community Stream academic programme.
Methods: Small groups comprising 15 medical students each, were assigned to 14 suburban "communities" in Colombo district for 18 months. Students were given theoretical inputs and guided by supervisors. Household practices and community services related to waste management were identified through a baseline survey. Stakeholder groups were formed to plan, implement and monitor the intervention. Outcome of intervention, at household and community level was assessed using pre-and-post test design.
Results: There were 1141 residents in 293 households in study area. Educational programmes had improved knowledge of residents about 3R concept (Reduce, Re-use, and Recycling) in all communities. Composting of bio-degradable waste was practiced in 12/14 communities, using bins provided (8/12 communities) or alternative methods (4/12 communities). Cleanup campaigns were conducted in 7 communities and home gardening in 5. Use of eco-friendly bag and sorting bags was evident in 6 and 4 communities respectively. Indiscriminate dumping and burning of waste had reduced in all communities. Elimination of mosquito breeding sites through house-to-house visits was done only in 3 communities. In 9 communities, sustainable linkages were established with service providers on waste management, resulting in regular collecting of waste.
Conclusions: Sustainable community-based waste management interventions are feasible through medical undergraduates, however their long-term impact needs evaluation.

FP-128

Environmental Health and Sanitation Conditions among Myanmar Migrant Communities in Samut Sakorn Province, Thailand

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This research aimed to investigate the environmental health and sanitation conditions among Myanmar migrants communities located in Samut Sakorn. The study design was mainly quantitative, cross-sectional study, and small part of qualitative also as Focal Group Discussion. The population for this study was Myanmar migrants both registered and unregistered living in 3 sub-districts of Muang District, Samut Sakorn province. The interviewing was conducted by simple random sampling. The major occupations were working in the

industries. The residentials of Myanmar migrants were mainly apartments belong to the private sector. The results indicated that the major problems of environmental health among Myanmar communities were solid waste, wastewater management, housing sanitation and vector control. Most of them accessed and used water supply (99%) and the bottled water was used as drinking water. Regarding the health problem, the majority was common cold 35 cases of 85 (41.2%); the second rank was muscle pain (14.1%). Most of the respondent reported that they preferred to use the services of private clinic, 36 of 85 cases (42.4%). Concerning the personal hygiene, it was recorded that approximately 96% of respondents answered that they always washed their hands before eating and cooking. Approximately 89% washed their hands after toilet. Then the proportion of food and water borne diseases were not mentioned from the respondents. Regarding the housing ventilation, it was observed that almost of house particularly bed room, the ventilation was very poor, and only 71.3% have sufficient ventilation. Some house did not have any windows, only door was provided since the limitation of their wages.

FP-129

Comparison of Cadmium Concentration, Protein and Organoleptic of Bivalves After Soaked on Vinegar Solution

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Surabaya and Sidoarjo, Indonesia, has special food made form bivalves that called “sate kerang” (cokcle satay). On the other hand, bivalves are widely used as bioindicators of heavy metals pollution in coastal area. In aquatic organism, heavy metal are bond into bivalves protein that called methallothienin. The objective of this study was to compare the cadmium concentration, protein and organoleptic of bivalves after being soaked in vinegar solution. This study was an experimental laboratory work with pre and post test design. Anadara granosa was used as sample because they had been mostly consumed by community. Vinegar solution were vinegar 25% and 12.5% with soaked period of 1 and 2 hours. Heavy metal cadmium were analysed by AAS with destruction method while protein quantity was done through determination of total nitrogen (N) with kyedahl method. Organoleptic examination was made by sensoric modality of eyes, nose and skin. After soaked on vinegar solution in two hour, cadmium examination result in Anadara granosa was falling into 1.12±0.13 mg/kg with 12.5% vinegar solution and even decreased until 0.88±0.07 mg/kg with 25% vinegar solution. Its organoleptic condition was also changed into vinegar’s aroma, harder and rubberer while the color was relatively paler. It is advised to hold on continuous research to examine heavy metal concentration in seafood especially bivalves.

FP-130

The Respiratory Effects of Particulate Air Pollutants Exposure on School-Age Children

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Studies examining combined health effects of chemical and biological particulates have been relatively lacking. We established a longitudinally school-based respiratory health follow-up to investigate whether exposure to particulates may alter childhood respiratory health. Study subjects were 99 elementary and middle school children in Sinjhuang city, Taipei County, Taiwan. We interviewed them by a structured respiratory health questionnaire and performed spirometry monthly from October 2007 to June 2008. Forced expiratory vital capacity, forced expiratory volume in 1 second, forced expiratory flow at 25%, 50%, 75% of FVC, and average expiratory flow over the middle half of FVC were recorded. Monthly lung function data was standardized for each participating students. During studying period, complete daily monitoring data for particulate matter (PM10, PM2.5, organic carbon, elemental carbon, nitrate, and sulfate), biological particulate (total fungal spores), and criteria air pollutants (NO2, CO, O3, and SO2) are available from EPA monitoring station and supersite. Factorial analysis was used to classify air pollutants. Two-stage analysis and forward stepwise linear regression were used to evaluate the lung function effects of lag 1 day air pollution. After adjusted for age and height, lag 1 day particulate matter and biological particulate exposure were negatively associated with FVC and FEV1 in both boys and girls, particulate matter exposure was negatively associated with FEF50%, FEF75%, and FEF25-75% for girls in addition. Outdoor particulate matter and biological particulate air pollution are risk factors of lung function on school-age children.

FP-131

Common Health Problems and Facilities Received by Children Working in Tea Shops\Restaurants, Kathmandu, Nepal

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International Labour Organization estimates, 246 million children are engaged in child labour in world. Nepal estimates, 71,767 child workers in 20,505 teashop/restaurants in 2003. These children are found to have health problems like, injuries, skin disease, athlete’s foot, and sexual abuse resulting into development of permanent damage of physical and mental health. This study identifies common health problems and types of facilities use by children working in teashop/restaurants at old bus park area of Kathmandu Metropolitan city. A

Cross-sectional study with closed and open- ended semi-structure questionnaire was used to collect data. Total of 100 subjects were interviewed by using Judgmental sampling method. Majority of children were 13- 16 years, 94 percent were boys. Health problems included 84 percent common sickness (69 percent headache), 74 percent infectious disease (51 percent Athlete's foot) & 35 percent accidental problems (Cuts 84 percent). All children received fooding and lodging but 21 percent don't get treatment for health. Only 7 percent teashop/restaurants have provision of periodic Health checkup and 82 percent don't have first aid box. Only seven percent children are currently attending school and 87 percent were compensated for the work done. This miserable condition and deprivation of children is due to lack of seriousness towards their future health or not feeling their importance in the society and lack of punishment to employers against violating child rights. There should be functional monitoring system to check level of compliance of implementation of Child Labour Act.

FP-132

Monitoring Ultrafine Particles in the Atmosphere of a Southeast China City

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Objectives: With rapid economic development, the size of the road vehicle fleet has increased dramatically in China. The continued annual growth of the vehicle fleet is an area of growing concern for air quality. Ultrafine particles (UFP) are important air pollutants from vehicle exhaust emissions, especially from diesel vehicles. However, there is no report available on UFP pollution from on-road vehicles in China. In order to investigate the health impact of UFP emitted from vehicles, a pilot study was conducted on a busy road in a southeast China city.
Method: TSI P-Trak Ultrafine Particle Counter was programmed for an eight-hour a day from 9am to 5pm. The monitoring procedure was conducted for three days on a viaduct in the city centre. Environment temperature and relative humidity were recorded by a HDL TINYTAG Datalogger.
Results: The average UFP concentrations (cm-3) were 44168, 49683 and 56446 on three different days. UFP concentrations were higher in the morning than that in the afternoon ($P<0.001$).
Conclusion: This preliminary study provides background information on UFP concentrations and distribution pattern at a city centre in southeast China. Further study is necessary to ascertain the concentrations of UFP from vehicle emissions at various locations and the impact of other environmental factors such as temperature, humidity and wind velocity. This is the first study on on-road UFP assessment in China. The study provides first hand information for future investigations in the causal relationship between UFP from vehicle exhausts and their health effect on humans.

FP-133

Worker Health in Trade Villages in Vietnam

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In Vietnam, the development of trade villages has greatly contributed to settle redundant employment and increase people's income and living conditions in rural areas. However, working conditions and worker health are urgent issues here. A literature review was deployed with over 40 studies from 2000 till now to evaluate risks and related health problems in Vietnamese trade villages. In Vietnam, there are approximately 1,500 trade villages classified into 5 main groups by product which specialized in food, dyeing and weaving, refuse recycling, construction materials and arts and crafts; with 1,4 million households and 11 million workers. Trade village is characterized with medium and small scale of production, backward technology, noxious input materials and unprotected workers. Common risks as dust, hazardous gas and noise, etc all exceed the national standards. Besides, working places are placed inside residential areas, the environment is seriously polluted by production waste, leading to various health problems. Typical diseases in trade villages include respiratory diseases as rhinitis, angina, bronchitis, asthma, skin diseases as dermatitis, fungi, burn, etc. Furthermore, eye diseases, musculoskeletal disorders, mental stress as headache, insomnia and amnesia or deaf due to being continuously exposed to noise also are concerned matters in trade villages. There are various kinds of risk in working and living environment in trade village. Specific risk leads to certain impacts on worker health. Therefore, they require particularly suitable solutions. It is necessary to deploy comprehensive and further researches to evaluate health risks and disease pattern in trade villages

FP-134

Spatial Analysis of Malaria Transmission in the Coastal Ecosystem

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The spread of malaria cases are depend on many factors, such as area characteristics or ecological factors. The objective of this study is to understand the spatial analysis of malaria transmission in the coastal ecosystem. The study was conducted in Nongsa Pantai Village, Batam City in 2004, using mixed-ecological study, which investigated within 3-4 months in the field. Data were collected using epidemiologic investigation, entomological survey that consist of vector, larval and breeding places survey, knowledge and practice of the

cases and suspect malaria and area mapping. Spatial analysis was used that were overlay and buffer method. The location for malaria transmission were inside and outside the house, either when individual or communal activities in the community. Within radius of 35.48 meters from the mean centre (398,680; 131,945.28) is mostly found malaria cases. Most cases were situated in the area of less then 400 meters in radius from breeding places. The potential breeding places in the area were in swamp areas and ponds or lagoons. Socio-demographic factors seems not to became a determinant factor for malaria, since cases was found in the early age to the eldest people and from well knowledge and high socio-economic to the lowest status in the areas. Malaria in coastal ecosystem was attacked to almost everybody, no matter how well the educational level, socio-economic status and occupation, as long as no fully protective malaria practiced among them. The spread of malaria were mostly within area of less than 400 meters from the breeding places.

FP-135

Lifetime Occupational History and Handgrip Measurement among the Rural Community in Pahang, Malaysia

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Occupational history is important in assessing mortality and morbidity of workers, while handgrip strength is an easily obtainable measure of physical health and muscle function. Our objective was to determine if handgrip measurement was related to occupational history and other related factors. A cross sectional study with a multistage cluster sampling was used. The stratification of the study population was done according to villages in each district. Each house in the villages acted as a sampling unit. The handgrip measurement was measured in kilograms among adults aged 30 years and above by using Jamar dynamometer. Sociodemographic characteristics, medical history, physical activity and occupational history were enquired using a pretested questionnaire. Anthropometric measurements and blood pressure were also obtained. SPSS version 16.0 was used for data analysis. There were 2197 respondents and 2069 (94.2%) subjects managed to complete the handgrip measurement. Majority of them (93.8%) were Malays. Half of them were in the age group of 40s and 50s. There were slightly more females than males. The mean right and left handgrip measurement was 25.5 ± 11.3 and 23.7 ± 11.0 respectively. Handgrip strength was significantly ($p<0.05$) correlated with height and weight. Advancing age, female sex, underweight and obese groups were significantly associated with weaker handgrip strength ($p<0.05$). Handgrip strength was also significantly greater ($p<0.05$) in those currently working, once worked in the past, long working hours and those involved in physically demanding job sectors.

FP-136

Prevalence and Correlates of Occupational Stress in Middle Level Managers of Domestic Commercial Banks in a District of Sri-Lanka

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Objective: To describe the prevalence and correlates of occupational stress among middle level managers of domestic commercial banks in Colombo district.
Methodology: A cross-sectional descriptive survey was conducted among 353 middle level managers in commercial banks in the Colombo district, proportionate to size of the middle level manager staff strength, using cluster sampling technique. Validated, self-administered decision latitude, psychological job demands and social support at work scales of the Job Content Questionnaire assessed occupational stress using high job strain and iso-strain according to demand-control-support model. Workers with psychological demands more than the median with decision latitude less than the median were categorized as having high job strain and workers with high job strain with social support at work less than the median were categorized as having iso-strain. Correlates were assessed using a 20-item self-administered questionnaire.
Results: The prevalence of high job strain and iso-strain were 17.8% (95%CI 15.1-20.5) and 10.2% (95%CI 8.1-12.3). In the multivariate analysis, taking office work home (OR=3.4;95%CI 1.3-6.9), perceived job dissatisfaction (OR=7.8;95%CI 3.6-16.8) and shorter distance from residence to place of work (OR=2.3;95%CI 1.1-4.9) were found to be significant correlates of iso-strain while taking office work home (OR=2.3;95%CI 1.2-4.5), perceived job dissatisfaction (OR=3.3; 95%CI 1.8-5.9), and reduction of the time spent with the family (OR = 5.6; 95%CI 1.3-23.9) were significantly associated with high job strain.
Conclusion: Prevalence of iso-strain and high job strain among middle level managers was 10.2% and 17.8%. Perceived job dissatisfaction and taking office work home were found to be significant correlates of iso-strain as well as high job.

FP-137

Reliability and the Validity of the Sinhalese Version of the Job Content Questionnaire (JCQ)- A Study in Banking Employees in Commercial Banks in a District of Sri Lanka

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Introduction: Three selected major scales of the Job content questionnaire namely decision latitude, psychological job demands and social support at work have shown to be a valid and reliable tool to assess job stress in many occupational settings.
Objective: To assess the reliability and validity of the Sinhalese version of the selected three major scales of the JCQ among banking employees in Sri-Lanka.
Methodology: A nominal group procedure was followed to translate the original English version of the decision latitude, psychological job demands and social support at work, major scales of the Job content questionnaire into Sinhalese language. A Delphi process with experts from medical, occupational and psychology reached a consensus on face and content validity of the three selected major scales. A random sample of 225 middle level managers and operational staff employees in domestic commercial banks in Gampaha district was given the 22 item survey questionnaire to assess construct validity by exploratory factor analysis with Varimax rotation. Reliability was assessed by using Cronbach's alpha for internal consistency.
Results: Cronbach's alpha coefficients for decision latitude (0.71), social support at work (0.8) and psychological job demands (0.61) were within the accepted limits. Exploratory factor analysis showed six meaningful factors that could explain the three theoretical dimensions of Karask's demand-control-support model.
Conclusion: Sinhalese version of the three selected major scales of the JCQ are reliable and valid for assessing occupational stress in banking employees in Sri-Lanka.

FP-138

Solid Waste Segregation Promotion Program in Sritrakul Vittaya School, Thailand

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Objective: To implement solid waste segregation promotion program (SWSPP) in Sritrakul Vittaya School, Thailand and to study the difference of sample group's knowledge, attitude and practice (KAP) towards solid waste segregation before and after SWSPP.
Methods: The samples were 192 students in Sritrakoolvittaya school. The KAP questionnaire was used as an instrument in this study. The difference of sample group's KAP towards solid waste segregation before and after SWSPP was analyzed by statistically with paired t-test.
Results: The average quantity of solid waste in each day was 48.43 kilograms which classified into 4 types as general waste, vanished waste, paper, and plastic which was 22.66%, 35.92%, 15.76%, and 25.66%, respectively. After SWSPP, the average quantity of solid waste in each day was 47.64 kilograms. The solid waste was classified to 4 types as general waste, vanished, plastic, and paper which were 43.67%, 29.75%, 17.42%, and 9.17%, respectively. Segregated plastic and paper were sold to junk shop which created outcome about 1,184 Bath/ month. Furthermore, the amount of solid waste which must be final disposed was decrease to 47.59%. The sample group's KAP towards solid waste segregation before and after SWSPP had different with statistical significant at the level of 95%.
Conclusion: Solid waste segregation promotion program in school can reduce solid waste quantity to final dispose and created outcome to school. It is the alternative way for solid waste management in school.

FP-139

Identifying Determine Factors Related to Unsafe Act/Substandard Practices at Rig Process, in X Company, Pekanbaru, Riau, Indonesia, 2009

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In rig process, there are 7 type of hazards; chemical, biological, physical, ergonomic, psycho-social, kinetic, and mechanic. Still, with the high potential of risk and accident, it was found that many of the workers acting (behave) unsafely while doing their job. Such as; using improper equipment, not using personal protective equipment, horseplay. Related to Heinrich Theory (1931), 88 % of accident is caused by unsafe act and 10 % unsafe condition. DuPont (1988-1998), said that 96 % of accident is caused by unsafe act. Based on the fact that was found in workplace, the objective of this research is to identify what is the determining factors, related to unsafe act/substandard practices at rig process, in X company. This research concerns about related factors to unsafe act/substandard practices at rig process, in X company. It focus on personal and job factor (basic causes) Still, based on Domino theory, the first domino, which is lack of control (management system), is the main cause of the sequence of unsafe act/substandard practices. This is a qualitative research, using primary data (observation, interview based on International Safety Rating System and International Environmental Rating System), and secondary data (documents treasure, such as Standard Operating Procedure (SOP), Job Safety Analysis (JSA)) at rig process, in X Company. As the results, there are 5 main factors that related to unsafe act/substandard practices at rig process; social economy factor, knowledge factor (related to training quality), equipment/property factor, supervision factor, and management factor.

FP-140

Analysis of Dyslipidemia as Risk Factor of Hearing Loss in Mining Employees at District of Nuha, Luwu Timur Regency, South Sulawesi, Indonesia

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Objective:The purpose of this research is to determine whether the high lipid profile could cause hearing loss, without exposure to any source of noise.
This research involved 124 male respondents, where 62 of them were classified as control group with normal hearing. Other 62 male were as case group with decrease hearing function without exposed by source of noise for four years.
The research method was observational with case control approach by carrying out the measurement of lipid profile and audiometric examination. Data was analyzed by SPSS software with Odds ratio Statistic test of 95% confidence limit.
The result of the research showed that there were a significant relationship lipid profile level towards hearing loss. Cholesterol total was a risk factor with Odds ratio 5.42, Trigliseride with odds ratio 11.18, High density lipid cholesterol has Odds ratio 1.583, Low density lipid with Odds ratio 15.5.
As conclusion this research confirm that dislipidemia alone may cause decrease of hearing level if lipid profile kept at high level for a long time. Low density lipid showed highest significant realtionship with coeficient regression 11.254

FP-141

Treating Wastewater Containing Formaldehyde with Activated Sludge System

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Large variety usage of formaldehyde results in frequent contamination in wastewater causing environmental pollution. This study reports results on the biological treatment of formaldehyde using co-substrate mechanism, which required the additional biodegradable carbon source for bacterial respiration. In this study, sucrose was used as a supplemental carbon source. Three ratios of formaldehyde to sucrose, 1:1, 1:2 and 1:3, were investigated in comparison with a control set (without sucrose addition). An activated sludge system in the configuration of 5-litre sequencing batch reactor (SBR) was employed and operated with HRT of 24 hrs and SRT of 20 days, except in the control set. No sludge was wasted (SRT was uncontrolled) in the control set in order to maintain sufficient biomass concentration. The formaldehyde concentrations in the feed varied from 180 to 446 mg/l while those in the effluents were around 1 mg/l or lower. High efficiency of formaldehyde removal, even in the control set, should be possibly caused by both air stripping and biological degradation. The efficiencies of total COD removal were mostly higher than 90%, especially higher than 95% in those experimental sets with sucrose addition. Although there was no sludge wastage in the control, biomass concentration was almost constant throughout the experimental period, indicating of little biomass synthesis when formaldehyde was the only carbon source. The formaldehyde to sucrose ratio of 1:1 was recommended.

FP-142

House Condition and Bronchitis Asthma Severity in the Working Area of Health Centre of Marisa Pohuwato District

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Background: Health Office of Pohuwato 2006 report showed that amount of asthma bronchitis sufferer who visited Health Centre of Marisa in year of 2006 were 61 and it was the most among eight of health centres in Pohuwato District. House condition is one of some factors may influence asthma bronchitis severity. The aim of this study was to analyze relationship between house condition, include in house ventilation, sun lighting, room temperature, humidity, house density, and asthma bronchial severity.
Method: This study was observational by means of cross sectional study. The population were houses in working area of Health Centre of Marisa Pohuwato District, Gorontalo Province. Sampling was using purposive sampling with criteria of housing of asthma bronchitis sufferer which live in working area of Health Centre of Marisa Pohuwato District. There were 51 samples.
Result: This study showed that there was relationship between ventilation, natural lighting, room temperature, room humidity, house density with asthma bronchitis severity (p = 0.00). Conclusion: It was conclude that there was relationship between house condition with asthma bronchitis. It was recommended to the society to improve house sanitation and to the government to give assistant of adequate house program to poor society.

FP-143

Neurobehavioural Effects of Inorganic Lead Exposure in Battery Workers in Selangor

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Introduction: Lead is predominantly used in the lead-acid batteries with estimated 76% of annual primary and secondary lead usage. Almost 95% of all adult lead intoxication is of occupational in origin. Early effects of lead on the central nervous system can be subclinical and test of neurobehavioural is one method to detect these effects.
Objective: To assess the neurobehavioural performances of battery manufacturing plant workers.
Methodology: This is a cross sectional study comparing the neurobehavioural effects of lead among 44 exposed and 33 non-exposed. Exposure was assessed through personal monitoring of exposure to lead; blood lead level was checked as a biomarker and symptoms and neurobehavioral outcome was assessed using standard

WHO questionnaire and Neurobehavioural Core Test Battery respectively.
Results: Thirteen of twenty points of monitoring showed level above Permissible Exposure Limit (Range <1μg/m³ to 768.88 μg/m³). Median blood lead levels for exposed and non-exposed workers were 11.10 and 9.45 μg/dL respectively. Exposed workers have higher proportion of forgetfulness (29.5%), excessive sweating (13.6%), diarrhea (15.9%), weakness of lower body (25.0%) and change of sense of taste (9.1%) but none was significant. Exposed workers scored lower in Benton Visual Retention, Digit Span, Pursuit Aiming, Digit Symbol, and Santa Ana Manual Dexterity Non-dominant Hand. Only Pursuit Aiming Test was significant (p=0.018). There were inverse associations in workers in the higher blood lead level category (≥12.2μg/dL) in the tests of Pursuit Aiming, Simple Reaction Time, Profile of Mood States (total score), Tension-Anxiety, Depression-Dejection and Vigour, in reference to workers in the category of lower blood lead level (≤8μg/dL) but these associations were not significant. Conclusion: The workers in the studied battery manufacturing plants are exposed to lead at varying level depending on the sections in the factory but they were protected from this exposure. There were no significant inverse association between blood lead levels and neurobehavioural performances in battery manufacturing plant workers.

FP-144

Female Reproductive Effects among Women Exposed to Polychlorinated Biphenyls and Phthalates

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Polychlorinated biphenyls (PCBs) may affect reproductive function. Besides, increasing evidences indicated association between phthalate and reproductive effects. Unfortunately, Humans are probably exposed to both PCBs and phthalates. The purpose was to determine whether the interaction between PCBs and phthalate to occur female reproductive damages. A mass poisoning occurred in Taiwan due to PCBs/PCDFs-contaminated cooking oil, and was called Yucheng. We followed the exposed individuals and a reference group. There are about 600 subjects interviewed by well-trained nurses and invited to undergo a field study. These tests in the field study included five phthalate metabolites (mono methyl phthalate [MMP], mono ethyl phthalate [MEP], mono butyl phthalate [MBuP], mono benzyl phthalate, [MBzP], and mono (2-ethylhexyl) phthalate [MEHP]). The final study subjects consisted of 71 currently menstruating women. Data analysis used multiple linear/logistic regressions. Totally 423 women of Yucheng women on average 0.2 (95% CI: 0.0~0.5; p=0.03) days shorter than the menstrual cycles of the reference women. Among 71 women showed shorter cycle in higher MMP exposure women (28.2 days vs. 30.5 days; p=0.0041) and PCBs exposed can modify the effect of MMP in menstrual cycle length. Likewise, the women with higher MEHP exposure had significantly higher prevalence rate of dysmenorrhes than reference women (29% vs. 67%; p=0.02). In addition, PCBs maybe prolonged time to pregnancy in Yucheng women (odds ratio: 2.34; 95 % CI: 1.23~4.59), no relationship between Phthalates and subfertility. In conclusion, the present findings PCBs and Phthalates can indicate negative effects and may be have interaction function in female reproduction.

FP-145

Photocatalytic Degradation of Multidrug Resistant Bacteria with Titanium Dioxide Under UVA Irradiation

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In recent decades, the rise of antibiotic-resistant bacteria was one of the most significant public health problems. When the bacteria become resistant to more than one drug, it is called multidrug-resistant (MDR) bacteria. The purpose of this study is to use UV light irritated TiO2 for three MDR bacteria (methicillin-resistant Staphylococcus aureus (MRSA), MDR Acinetobacter baumannii (MDRAB) and vancomycin-resistant Enterococcus faecalis (VRE)) inactivation in suspension. From our findings, it was indicated that the survival fraction of MDR bacteria decreased exponentially with increasing TiO2 dose. MDR bacteria required TiO2 doses of 1,004-1,823 and 1,829-3,436 (mg x μW x min/ml-cm2) for 90% and 99% inactivation, respectively. In addition, the TiO2 dose for 99% inactivation was nearly 2 times higher than that for 90% inactivation. In comparison with other microbial species, we found the required TiO2 dose for MRSA and MDRAB were significant lower than those used for Escherichia coli inactivation. The differences in bacterial cell membrane may result in the different microorganism susceptibility to TiO2. In summary, TiO2 should be an effective method for reducing MDR bacteria number between 1-3 logs in suspension.

FP-146

Relationship between the Temperature of Work Environment and the Concentration of Uric Acid in Urine of the Workers within the Furnace Section of PT INCO, Tbk Soroako 2009

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Objective An extreme temperature can cause an inconvenience and also can change the balance in the concentration of body's electrolyte. One of the results is an increase in the concentration of uric acid in urine. The aim of this research is to determine the relationship between the temperature of work environment, duration

of exposure to work environment temperature and the concentration of uric acid in urine of the workers who work in the furnace section of PT. INCO, Soroako. Method This research uses the method of analytical survey with a cross sectional approaching. Result It can be seen that there are 66 samples that have an abnormal concentration of uric acid in their bodies, out of 105 respondents. The temperature of work environment in the furnace section of PT. INCO is 29,9º C, which has exceeded the critical value of 29,4% °C. The exposure duration which should not exceed 4 hours a day, in point of fact, from 105 respondents, there are 35 (33,3%) of them whose exposure durations exceed 4 hours a day. Conclusion There is a relationship between the temperature of work environment and the concentration of uric acid of workers' urine (ρ = 0,001) and there is also a relationship between the exposure duration to work environment temperature and the uric acid concentration in workers' urine (ρ=0,021). The researchers hope that PT. INCO, Tbk Soroako will make an effort to take control not only of the environment but also of its workers.

FP-147

The Difference between Types of Occupational Injury and Turnover among Nurses in a Medical Center: A 6-Years Follow Up

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Background & Purpose: Occupational injury is an uncomfortable experience and may increase intension of nurses to leave their jobs. Therefore, the aim of this study was to compare the turnover rate within types of occupational injuries.
Methods: A retrospective review of all occupational injury reports from full-time nurses from January 2003 to December 2008 at a medical center in north Taiwan. Kaplan–Meier survival functions were used to estimate cumulated turnover rate curves within types of occupational injury, and compare the difference via log rank test.
Results: A total of 225 accident cases were reported, sharp injury contributed to 73.7%, work-related falling and traffic accident during on and off duty were 26.3%. Almost half of the nurses were between 26-35 years (44.9%), majority was female (99.1%), clinical working length was 5.52 years. Nurses who had been suffered occupational injury had higher turnover rate than those had not been injured in 2003(38.6% vs. 7.9%, p= .000), 2004(28.2% vs. 13.9%, p= .014) and 2006(25.8% vs. 12.36%, p= .028). Kaplan Meier curve showed that sharp injuries exhibited higher cumulated turnover rate than another injuries (36.6% vs. 27.2%), but the Log rank test did not reveal significant difference (p= 0.454).
Conclusions: The turnover rate of nurses with occupational injuries was higher than others; therefore, hospital managers should pay more attention to the nurse who has been injured and develop intervention to reduce the occupational hazard.

FP-148

Urinary Nonylphenol Level Using HCL Hydrolyzing and Application

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One of proved endocrine disrupting chemicals (EDCs), nonylphenol (NP) is a widely used non-ion surfactant that may cause infertility and reproductive defects. Most researches used enzyme hydrolyzing method, a complicated procedure, to determine NP in urine. We developed the simple HCL hydrolyzing procedure for urine pretreatment and measured the free NP using high sensitive HPLC-fluorescence detector. Urine samples provided by hair salon workers and college students were analyzed and compared. The results showed that the HCL hydrolyzing pretreatment revealed not only a better performance than enzyme method but also more convenient. The analytic method showed a correlation coefficient value of greater than 0.999 for the standard calibration curve, and an average spike recovery of about 90% with the coefficient of variation (CV) of < 7%. Urine samples provided by the hair designers, hair assistants and students at hair salons were analyzed and compared. The gravity adjusted average NP concentration among all urine samples was 7.4 ng/mL. The average in hair assistants was 2 times higher than those in designers and students. Our study found that hair salon workers are at higher risk of NP exposure.

FP-149

Comparing Asbestos Contents in Building Materials between Samples Collected in Taiwan and from Thailand

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Asbestos has the characteristics of acidity-alkalinity and heat resistance with high tensile strength. This material can be used to manufacture asbestos panels, pipes, asbestos cement and fiber, and cement board. The workers handling asbestos may expose to the fiber at the risk of health hazards. This study compared asbestos contents in building materials between samples collected in Taiwan and from Thailand. We used XRD to analyze the types and contents of asbestos. Samples were pre-treated using formic acid and dispersed with the ultrasonic cleaner for 10 minutes, then stayed for 12 minutes in the room temperature. Results showed that the asbestos tiles collected in Taiwan consisted of 2.3~5.4% Chrysotile and 0~0.87% Amosite. The partition materials collected at a school contained 0.31% of Amosite, and

fireproofing materials collected at a high rise building had 0.20% of Amosite. On the other hand, in sample collected from Thailand about 14~14.56% of asbestos tile was Chrysotile, but no Amosite was detected. This study showed that the asbestos remain an important environment hazards in building materials in both Taiwan and Thailand.

FP-150

Phytotoxic Assessment of a Co-Compost from Different Ratios of Residue from the Sweetener Industry and Food Waste

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This research aimed to assess the phytotoxicity of co-compost produced from residue from the sweetener industry and food waste. Food waste was collected from the Faculty of Public Health cafeteria Mahidol University and residue from the sweetener industry was obtained from MC-Towa International Sweeteners Co., Ltd., Thailand. The mixture ratios between residue from sweetener industry and food waste were 0:100, 10:90, 20:80, 30:70 and 40:60. The composting time was processed until it reached the stable stage in 9 weeks. The heavy metal contents in produced co-compost were determined for all mixture ratios. The concentration of arsenic, lead, chromium and copper in produced co-compost were 3.26 - 7.81, 0.02 - 0.31, 0.79 - 3.03, and 1.60 - 4.78 mg/kg, respectively for mixture ratios of 0:100, 10:90, 20:80, 30:70 and 40:60, respectively. Contents of arsenic, lead and chromium in final produced co-compost were significantly different among the mixture ratios (p-value<0.05).
The results of this study indicated that the contents of concern heavy metal met the Thai, North America and European country compost standards. The major nutrients for plantation; namely, total nitrogen, available phosphorus and total potassium, had average contents in the range of 1.53 - 8.05, 0.18 - 0.48 and 0.0538 - 0.1026 %, respectively. The moisture content, pH and C/N ratio of final co-compost were in the ranges of 0.39 - 0.64, 6.21-6.97 and 4.98 -18.

FP-151

Exposure of Occupational Coffee Roasting Oil Fume

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In recent years the Coffee roasting business is booming in Taiwan. Home roasting coffee shops have opened one by one which bring more workforces into the roasting industry. Our last research points out that coffee roasting oil fume contain the chemicals of Caffeine, Catechol and Hydroquinone, these chemicals are harm material to human. The effects of acute and chronic roasting coffee oil fume on the metabolism of Sprague-Dawley rats (SD rats) in rat blood and urine were studied. SD rats were used as biological indicators separately in a chronic exposure experiment to low level of particulate oil fume created by roasting Brazil coffee in enclosed spaces for 17 weeks and in an acute exposure experiment to very high level of particulate oil fume for 4 weeks. Blood and urine samples from each rat were analyzed with biopsy of animal tissue slice was done to observe the organ for any pathological change. The blood results showed that the complete blood Count, liver function index inspection and immunoglobulin of acute exposed has significant difference from the unexposed, and the lung and kidney tissue slice has injury, proving oil fume has effect on rats, and presumably will have the same effect in those exposed to oil fume.

FP-152

The Gene-Work Exposure Interaction in Causing Occupational Herniated Intervertebral Disc (HIVD) in Taiwan

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Background: Herniated intervertebral disc (HIVD) is listed as an occupational disease in Taiwan's workers' compensation system. Although occupational and personal factors play a role in etiology of HIVD, genetic effect may also contribute to the pathogenesis of it.
Purpose: We conducted a hospital-based case-control study to examine the gene-work exposure interaction in causing HIVD.
Study Design: 62 cases and 53 controls were entered to the hospital-based case-control study. Every participant was assessed with questionnaire, MRI and BMD assessment, blood testing and genomic analysis, photographs taken of simulated working posture and lumbar load estimation.
Result: The result showed that HIVD are associated with older age, higher BMI, longer working tenure and higher education level. While categorized into 3 groups, the highest cumulative lift load and total load group had increased odds ratio of 2.6 and 2.5. After adjusted for age, gender, BMI, tenure, marital status and education level, the odds ratio for highest lift load was 2.7. Among these high lifting group, those with COL9A2 carrying a Trp allele seemed to have higher risk than those without a Trp allele. Also, those with CT/TT genotypes of VDR gene had higher risk than those with CC genotypes.
Conclusion: The result of the study suggested life time cumulated load are associated with HIVD, showing a dose-response gradient. COL9A2 with any Trp allele seemed to interact with lift load and played susceptibility factor among workers exposed to weight-lifting.

FP-154

Self-Reported VS. Observed Handwashing Behavior of Nursing Staff: A Preliminary Study

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Literature shows that the hands of health care workers are the major infection channel for the transmission of bacteria and diseases in hospitals after the landmark achievement of routine handwashing made by Dr. Semmeweis early in 1947 was recognized. While many research efforts have been dedicated to exploring the determinants of handwashing behavior, most studies used self-reported data gathered through questionnaires. This ongoing project aimed to examine the consistence of handwashing behavior between self report and observation and the compliance rate with correctness of hand washing as well. In a previous study, the general surgical ward (GSW) at one teaching hospital with 700 beds was showed to have an in-hospital infection rate higher than other units. Therefore, the nursing staffs with informed consent of research from the GSW were selected to serve as the participants of this study. Observation of handwashing behavior before and after patient contact was conducted and its correctness was assessed, followed by a self-reported questionnaire. The preliminary results show that before patient contact the compliance rate and percentage of correctness was 4.65% and 25%, respectively, and after patient contact, 20.51% for the compliance rate and 60.25% for the correctness percentage. Besides, the participants reported an average score of 4.6 in the 5-point Likert scale indicating that there existed a large discrepancy between the self-perception of compliance and observed fact for the handwashing behavior. For future studies, nursing staffs from more wards and direct supervisors for the observation activities are suggested.

FP-155

Association City Air Quality toward Lung Function and Respiratory Complaints among Traffic Policemen of Surabaya City, Indonesia

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Some of city air pollutants may irritate respiratory tract, and lead to lung function impairment and respiratory complaints. Therefore, the aim of this study was to analyze association between air level of NO2, SO2, and dust in Surabaya city, Indonesia toward decrease of lung function and increase of respiratory complaints in local traffic policemen.
This study was an observational analytic study conducted cross-sectional among 21 traffic policemen worked at high traffic volume of Dolog, Wonokromo, and Siola areas of Surabaya city. The control group was 21 office policemen who met the given criteria. Data collection was conducted from December 2007 to July 2008. Independent two sample t test, linear regression and multiple logistic regression statistical tests were used to analyze association between air level of NO2, SO2, and dust toward decrease of lung function and increase of respiratory complaints.
Results showed that average levels of air NO2 and dust had exceeded the established standard, while average level of air SO2 was still below the standard. Lung function test revealed that 8 out of 21 (38.1%) traffic policemen had mild restrictive airways. Whereas in control group only 2 out of 21 (23.8%) office policemen had mild restrictive airways. Then traffic policemen had restrictive impairment 4 times higher risk and 1,4 times higher risk having restrictive airways compared to office policemen. Moreover, traffic policemen had respiratory complaints 2 times higher risk than office policemen. Furthermore, smoking cumulative dose had significantly affected both % FVC predicted and % FEV1 predicted in traffic policemen (Linear regression test, $p<0.05$). Smoking cumulative dose, age, and SO2 concentration had significantly affected lung function and respiratory complaints in study group of traffic policemen (Multiple logistic regression test, $p<0.05$).
It is concluded that traffic policemen have poorer lung function and have more respiratory complaints compared to office policemen. It is considered that city poor air quality has causative factor into lung function impairment. It is suggested that (1) local government provides better public transportation service; (2) controls emission gas of motor vehicles; and (3) provides proper respiratory protection device and prohibit smoking during working hours for traffic policemen.

FP-156

Dengue Preventive Behavior among Secondary School Students, Bangkok

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In Thailand, mortality of dengue cases was not severe but morbidity was still increasing even though there was an existing vector control program present. Dengue preventive behavior is very important and be applied for the control program as well. This cross-sectional study aimed to explore the preventive behavior on dengue haemorrhagic fever (DHF) and its related factors among secondary school students. The sample was comprised of 300 students between the ages of 12 to 16 years old who were attending secondary schools under Bangkok Metropolis in Nong-Kheam district, Bangkok, Thailand during January and February, 2009. The research used self-administered questionnaires and did reliability test before conducted. This study was documentary approved of ethical clearance from the Ethics Committee for Human Research of the Faculty of Public Health, Mahidol University. Data was subsequently analyzed descriptive and analytic statistics by Chi-square test. Results showed that the knowledge and perception

against DHF and its prevention, students only 18% had good level of overall knowledge, and nearly 21% had good level of perception on DHF. The results revealed that 4.7% of students had good level of preventive behavior and 75.7% had needed an improvement of preventive behavior. There was significant association between knowledge on dengue infection with preventive behavior on DHF among students ($p < 0.05$). In conclusion, regarding to the results, it is recommended that existing health education programmes should be continued and intensified with emphasis on improving the knowledge of the students on prevention and control practice.

FP-157

Risk Factors of Coronary Heart Disease (Chest Pain) in above 15 Years Old People in Indonesia

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Coronary Heart Disease (CHD) become a major cause of mortality in Indonesia. It is divided into Infark Miokard Acute and chest pain. The aim of this study was to find out risk factors of coronary heart disease at Indonesian people by analyzing the environment and behavior factors and also traditional risk factors of CHD with chest pain. This study used basic health research (Riskesdas) 2007. Subjects were 15 years old (n=209.740) from all provinces in Indonesia. Univariate test was used for data analyzing to see the variable overall, chi square test to asses the influence and risk factor between environment, behavior and traditional factors with CHD and multivariate logistic regression was used at the end. The study showed several CHD risk factors from environment and behavior; there were weighty job (OR=1,21, 95% CI=1,171-1,258), emotion disturbance (OR=5,34, 95% CI=5,131-5,549), and high consumption of salty food (OR=1,070, 95% CI=1,011-1,133) and bowels (OR=1,28, 95% CI=1,030-1,578) also low consumption of fruits and vegetables (OR=1,53, 95% CI=1,252-1,868). The traditional risk factors were central obesity (OR 1,15 CI(95%)=1,084-1,208; p=0,000) and hypertention (OR 1,46 CI(95%) = 1,394-1,521; p=0,000). We conclude risk factors of CHD at Indonesian people are rough occupation, emotion disturbance, high consumption of salty food and bowels, low consumption of fruits and vegetables, central obesity and hypertention. It is recommended that socialization of stress management, increasing of fruits and vegetable consumption, and physical activity were needed.

FP-158

Utilization and Expenditure of Healthcare Goods and Services in Pahang

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Objectives: To describe the pattern of utilization and expenditure of health care goods and services in Pahang.
Methodology: In 2009, a cross sectional study was carried out in Pahang, which is considered as rural and the biggest state in Peninsular Malaysia. Five districts were chosen by simple random sampling given a total of 1182 households, with a total of 4029 respondents. A face-to-face interview on the adults and parents of children were conducted using validated questionnaires. Respondents were asked on their utilization and expenditure of outpatient care in the past two weeks and inpatient care in the past one year. Barriers to the utilization of healthcare services and goods were also determined.
Results: Seventeen point five percent out of the 4029 respondents' utilized health care services either at the public or private facilities, with 13.5% and 6.1% received outpatient and inpatient cares, respectively. Of those who sought outpatient care, 13.7% took self-medication and 14.1% went to traditional healers. The mean cost for outpatient care was highest (RM 62.09) at the private health facilities, followed by self medication (RM70.89), traditional healers (RM 37.71) and public healthcare facilities (RM 9.83). There was significant association between health care utilization with age, gender and health status. Distance and transportation were not the barriers for utilization of healthcare services.
Conclusion: People in the rural areas continue to seek outpatient care from traditional healers and by self medication although the accessibility to the public health was good.

FP-160

Market Potential Analysis and Service Attribute in Islamic Hospital in Depok City Year 2007

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Muslim community as the largest population in Indonesia and in Depok city with the percentage of 91.94 is considered as a prospective market for Islamic dealing, including hospital business. However, this religious awakening has not been accommodated in the whole sectors, especially in health service –none of the twelve hospitals in Depok has Islam culture and environment. Hence, it is significant to investigate the market potency and the service attributes of the Islamic hospitals.
The study shows that the market characterizations of Islamic hospital in Depok are adult Muslim, degree holder, mostly are professional or private employee. Majority of them are married, have income 2,000,000–3,000,000 rupiah per month, and allocate less than 100,000 rupiah for health care post.
Majority of the respondents chose the hospital based on the officer service, the completeness of the facilities, and cleanliness of the hospital area. All of the respondents

which reflect the potential markets already anticipate and wish for the real Islamic hospital to be present in Depok City.
The respondents describe the Islamic hospital characterization should be including good doctor, nurse, and other officers quality; reflect the humbleness, cleanliness, and aurat closure; special spiritual Islamic guidance (near-death guidance, etc); special treatment by special officer for aurat related treatment; pricing fares are based on the customer ability and willingness to pay; not merely profit oriented, but more to provide happiness to all stakeholders.

FP-162

The Comparison of Health Fitness between Physicians and the Norm of National Sports Council

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Purpose: In different jobs, the health fitness for every person is different. Moreover, different workload would need different health fitness. Physicians have most sufficient health knowledge among all the occupations. Therefore, they should have good health fitness. But the related researches are still unknown. The purpose of this study is to assess the difference of health fitness between physicians and the norm of national sports council in Taiwan area.
Methods: The subjects of this research were 33 physicians in Taiwan who voluntarily attended the 98 seminar of health fitness application on clinical medical. Their mean ages were 50.19±9.54 years old. The research instruments were inbody 220 and kochi health fitness machine. The testing items included body mass index, flexibility, muscular strength, muscular endurance and cardiovascular fitness. After all the subjects were tested their health fitness, and then compared the norm of national sports council. The statistical method was independent t test, and the significant level was $\alpha = .05$.
Results: Among all different age groups, there is no significant difference of body mass index, muscular endurance, flexibility, and cardiovascular fitness between 31 to 40 years-old male physicians and the norm of National sports council, and between 60 to 65 years-old and the norm of National sports council. However, there is significant difference in muscular endurance and flexibility between 46 to 50 years-old male physicians and the norm of National sports council, and the statistical results show that they are better than the norm. Moreover, there is significant difference of flexibility between 51 to 60 years-old male physicians and the norm of National sports council, and the statistical results show that they are better than the norm.
Conclusions and Suggestions: The conclusion of this study is that the muscular endurance and flexibility of physicians are better than the norm. It means that most physicians maintain their fitness well. It is suggested that female physicians should take the same fitness test to understand their fitness.

FP-163

Incidence of Hypertension, Hyperglycemia and Hyperlipidemia: the Results from a National Survey

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Incidence of hypertension, hyperglycemia and hyperlipidemia are lacking in Taiwan. We aim to perform a nationwide population-based survey, named the Taiwanese Survey on Prevalence of Hypertension, Hyperglycemia and Hyperlipidemia (TwSHHH), to estimate the incidence rates of hypertension, hyperglycemia and hyperlipidemia. In 2002, a total of 6600 in 7578 subjects enrolled in a survey and collected complete data from interview and physical examination. There was 5942 survival and 658 dead collected in 5yr follow-up. Of them, 4682 subjects completed questionnaire interview, measurement of blood pressure, and collection of blood and urine samples, and followed disease outcome by insurance and death data. The subjects in 2002 who were free of the hypertension, hyperglycemia and hyperlipidemia were used to estimate the relevant incidence. The 5yrs cumulative incidence was 24.2‰ of hypertension, 7.3‰ of hyperglycemia, 20.4‰ of hyperlipidemia. In general, these incidences had gender difference, increased with aging and varying with resident region. Men had higher incidence than women, especially in those subjects age ranged 15-40 yrs. However, an inverse appeared in age group 40-59 yrs. Among those age over 60 yrs, over 6.5% men and 7.5% women had incident hypertension, over 1.3% men and 1.5% women had incident hyperglycemia, and over 3.5% had incident hyperlipidemia in 5yrs following. Our findings emphasize the urgent need to develop national strategies for the prevention and detection, especially those over 60 years, of the hypertension, hyperglycemia and hyperlipidemia in Taiwan.

FP-165

Dating Model of Junior High School Students, Schools of Smp Negeri 6, Smp Negeri 23, Smp Kartikachandrakirana and Smp Cokroaminoto in Makassar City

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PKBI survey in South Sulawesi in 2005 about sexual behaviors of adolescents in secondary schools revealed that 59.7 % students had engaged in sexual activites: Kissing, Necking, Petting dan Intercouse (Information and service centre of adolescents in South Sulawesi, 2007). This study is Descriptive Survey. The population

are students and parents in four junior high schools in Makassar City. This study shows that 27.0% of students said they have a boy/girl friend and 44.7% of them said they haven't had boy/girl friend. From those who have a boy/girl friend, 14.7% of them have done hugging, and 17.4% have done kissing. There were 44.3% parents said their son/doughter have done kissing. 54.1% students have khown about sexual education-related terms before reaching puberty. 50.4% respondents get information about puberty from friends. 13.9% respondents said the most frekuensi behavior of their friends is kissing cheek. 44, 9 % respondents answered that sexual education had been taught in school. The most treatment of schools staff when finding students dating was giving advice (11.9%). The most right answer about the sign of puberty at boys is questions 3-4 (61.1%). The least right answer about the sign of puberty is the lenght of puberty period (9.0%). For students, engaging in many activities can result in positive effect for them especially for their sexual behaviors. It is important to provide a kind of institution to express adolescents problem related to the

FP-166

The Comparison of Health Fitness between Physical Therapists and the Norm of National Sports Council

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The professional characteristic and the education of physical therapists have been trained would affect them more understand physical fitness. Therefore, they would have good health fitness. But the related researches are still unknown. The purpose of this study is to assess the difference of health fitness between physical therapist and the norm of national sports council in Taiwan area. The subjects of this research were 41 physical therapists in Southern Taiwan who voluntarily attended the 98 seminar of health fitness application on clinical medical. Their mean ages were 34.88±4.54 years old. The research instruments were inbody 220 and kochi health fitness machine. The testing items included body mass index, flexibility, muscular strength, muscular endurance and cardiovascular fitness. After all the subjects were tested their health fitness, and then compared the norm of national sports council. The statistical method was independent t test, and the significant level was α= .05. There is no significant difference of body mass index, muscular endurance, flexibility, and cardiovascular fitness between 26 to 30 years-old male physical therapists and the norm of National sports council. Also, there is no significant difference of body mass index, muscular endurance, flexibility, and cardiovascular fitness between 31 to 35 years-old female physical therapists and the norm of National sports council. However, there is significant difference in body mass index between 26 to 30 years-old female physical therapists and the norm of National sports council, and the statistical results show that their body mass index is bigger than the norm. Moreover, there is significant difference of cardiovascular fitness between 36 to 40 years-old male physical therapists and the norm of National sports council, and between 41 to 45 years-old female physical therapists and the norm of National sports council. The statistical results show that their cardiovascular fitness is worse than the norm. The conclusion of this study is that the health fitness of physical therapists is not as well as they should be. The subjects of this study are physical therapists who are taking part in the seminar voluntarily. Therefore, we assured that they would have better health fitness. However, the results show different. It is suggested that physical therapists should enhance their fitness training.

FP-167

Motivation Effecting the Health Project Management Performance among the Chiefs of Health Center in Public Health Region 10

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This Cross Sectional Descriptive Research aimed to study the level of the Motivation the Performance of Health Project Management and the Motivation Affecting the Health Project Management among the Chiefs of Health Center in Public Health Region 10. 258 Samples were selected from 553 the chiefs of health center by systematic random sampling technique after sample size calculated. The content validity was checked by 3 experts also the Cronbach efficiency was used to explain reliability =0.85, Data was collected between 1-30 June 2008. It was analyzed and reported including frequency, percentage, mean and standard deviation for demographic data, Pearson Product Moment Correlation Coefficient and Stepwise Multiple Regression were used to conduct the factors affecting the Health Project Management among the Chiefs of Health Center in Health Region 10. The study revealed that the Health Project Management among the Chiefs of Health Center in Public Health Region 10 was at high level (=3.98,S.D.=0.47), in each part, the highest level was the initiation of project and met at the high level (=3.95,S.D.=0.48) and the lowest level was the termination of project shown at the high level (=3.95,S.D.=0.48) .The correlation between the motivation factors, the hygiene factors and the Health Project Management among the Chiefs of Health Center in Health Region 10 was significant at P-value .0.05 (r=0.519, 0..61). The responsibilities of the motivation factors and the personal life, the administrative and policy and an interpersonal relationships of the hygiene factors affecting the Health Project Management among the Chiefs of Health Center in Public Health Region 10. The 4 factors could predicted the Health Project Management among the Chiefs of Health Center in Public Health Region 10 = 51 %. The majority of

problem and obstacle were workload and lacks of the motivation of compensation.

FP-168

Is Breast Self Examination (BSE) Still Relevant to Detect Breast Lump?

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Objective: This study aims to determine the rate of breast self examination (BSE) among the female staff of University Malaya and to show association between BSE and clinical breast examination (CBE).
Methods: A total of 1132 questionnaires were posted to all female staff of University Malaya, aged 40 years and above. Their knowledge on breast cancer, practice of BSE and CBE prior to the study were determined. Those who claimed to have detected breast lump were called for interview, followed by CBE which was performed by a doctor.
Results: The response rate for this study was 48 percent (539 respondents). The rate of respondents having awareness on breast cancer was 98.7 percent. Eighty four percent (454) of the respondents had done BSE in their lifetime. However, only 12.0 percent performed regular BSE at the recommended time. Sixty two percent (334) had undergone CBE while 30.8% (165) had done mammogram. There is significant relationship between CBE and BSE whereby those who had CBE were twice more likely to do BSE than those who never had CBE. Nineteen percent (84 respondents) of those who did BSE claimed they had detected breast lump. Of these, 87% (73) had gone for CBE and all were confirmed to have breast lump.
Conclusion: CBE should be done to all women at risk of breast cancer to encourage and teach BSE. BSE is still relevant since in this study 87 percent of the breast lump detected by BSE were confirmed by CBE.

FP-169

The Analysis on the Establishment of Health Budget Allocation for APBD of Gorontalo Province of 2002-2009

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Background : Health Budgetting shows a various pattern across local governments in Indonesia. The main source of this budgetting is provided by Indonesian government through APBD (District Development Budget). Although the increase of such budget is experienced by few local governments, the fact shows that the average increase is only 9%.
Objective : The study was aimed to identify factors governing establishment of allocation of health budget in APBD of Gorontalo province for the year 2002-2007.
Method : The study is qualitative in nature employing a depth interview method to obtain primary data and collecting information from related institutions such as BAPPEDA (District Planning and Development Agency), BKD (District Employment Agency), legislatif institution of Gorontalo Province, and Health Office of Gorontalo Province. Data was then analysed and verified employing a triangulation method.
Results : The study showed that factors governing the allocation of health budget was the ability in producing a working plan by taking into account factors such as the local commitment, priority scales, advocation, and the balance between budget items and the local income through a transfer of Public Allocation Fund.
Conclussion and Recommendation : We conclude and recommend that Health Office of Gorontalo Province should improve the ability in planning the health budget management through advocation, and should establish a priority scale of program activities based on the compulsary rights and minimal serving standard, and should take into account the balance of the budget items which have been established based on Budget Public Policy.

FP-170

A Pro Worker Incentive/Pay Scheme for Health Care Manpower in Remote Areas: Case Study in the Province of Lampung, Indonesia

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This qualitative study seeks to identify problems and their implications on health care manpower in the Province of Lampung by analyzing relevant documents, holding in-depth interviews, FGD, CDMG for decision-makers and key stakeholders with the aim of producing a consensus.
Primary and secondary data collection as well as triangulation of data was carried out in ways that ensure quality. The study covers provincial, district and municipal health office, community health center, hospital, and other health facilities.
The study shows that almost all of the Province of Lampung health offices and work units at district and municipality levels experience a shortage of health care manpower. The ratio of health workers (medical doctors, dentists, midwives, nurses and others) to every 100,000 people is below the national figure. The ratio of doctors to the population here is 5.6 (the national figure is 10.73). Informants have identified the absence of an adequate system of compensation for health workers (midwives, nurses, general practitioners) in the municipality of and in districts in the Province of Lampung. A monthly incentive of IDR 250,000 and IDR 1 million is available for specialists only in the Province of North Lampung and the Province of West Lampung respectively.
There are differences in districts of the Province of Lampung's financial ability, but there has yet to be a scheme that accommodates the differences. The study

shows the possibility of implementing a scheme that covers both material and in-kind incentives that are based on the region's characteristics and the provincial government's financial ability.

FP-171

Effects of Behavioral Modification on Exercise and Appropriate Food Consumption among Overweight Primary School Students, Maung District, Uttaradit Province

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This research is a quasi-experimental research study aimed to investigate the effects of behavioral modification program on exercise and appropriate food consumption among overweight primary school students, Maung District, Uttaradit Province. Self-efficacy and social support were applied program activities to modify behavior of the students. The study participants aged 10-12 years were selected by simple random sampling on inclusion criteria, and the divided into two groups namely 42 students into an experimental group were exposed to the behavior modification program for 10 weeks, while no action was directed to the comparison group. A questionnaire was used to collect data. The data were analyzed by ordinary descriptive statistics such as frequency distribution, calculation of proportion, mean, standard deviation, and min-max values. Within groups were compared by the paired t-test, and between groups were compared by the independent t-test. Statistical significance was assumed at $p<0.05$.
As a result of this study it could be shown that after implementation, the experimental group significantly improved their knowledge, practice on exercise and appropriate food consumption, social support than before the experiment ($p<0.001$). Perceived efficacy, outcome expectation, improved significantly as well ($p<0.01$). The experimental group significantly improve their knowledge, perceived efficacy, outcome expectation, practice on exercise and appropriate food consumption, social support than the comparison group ($p<0.001$).

FP-172

The Combined Effects of Alcohol and Coffee on Visual Reaction Time

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Many researchers studied the factors that affect reaction time (RT). Many studies of alcohol's effect on RT reveal that it significantly prolongs RT, whereas, caffeine reduces RT. There were 30 healthy subjects complying with inclusion and exclusion criteria. The research comprised 8 experiments consisting of A1 (1 dose of alcohol), A2, C1 (1 dose of instant coffee), C2, combination of A1+C1, A1+C2, A2+C1, and A2+C2. This research recorded subjects'3 parameters including visual evoked potential (VEP), blood alcohol concentration (BAC) and RT. These parameters were recorded at 0, 30, 60, 90 and 120 minutes, referred to as T0, T30, T60, T90, T120, respectively. Data were reported as mean ± S.E.M. and analyzed by using repeated measures ANOVA. The study demonstrated that the mean RT and P300 latency were prolonged from 226.01 ms at T0 to 253.02 ms at T30, and from 368.27 ms at T0 to 411.97 ms at T30, respectively. The BACs of both groups were not statistically different (39.50 mg% for A2 and 37.93 mg% for A2+C2). The most important result revealed that the RT of A2+C2 at T30 (232.14 ms) was not significantly different to that of control (229.04 ms). In conclusion, the results suggest that ingestion of C2 after A2 ingestion could counteract the A2 effects. However, the results of this study support the public policy of "Drink don't drive".

FP-173

Health Seeking Behavior for Malaria of Shan Ethnic Group in Lashio Township, Northern Shan State, Myanmar

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Objectives: The aim of this study was to identify the health seeking behavior for malaria and its associated factors of Shan ethnic group.
Method: A descriptive study was conducted in Lashio Township, Northern Shan State, Myanmar. Total of 298 respondents experienceing malaria within the last 5 years were recruited from 8 villages of the studied township by structured questionnaire interview.
Results: The results showed that malaria infected cases went for drug seller (39.3%), health center (28.9%), self treatment (25.8%), and private clinic (6.0%) as their first choice of treatment. Among those uncured from self treatment and drug sellers from the 1st choice of treatment went for a better care: health center, government hospital and private clinic and almost all of them get cured from their 2nd choice. However those who went for drug seller resulted as uncured more for this choice of treatment and they went for health center as their 3rd choice of treatment. Only a small number, 2 out of 298, went to hospital and health center as their 4th choice and they get cured. The only factor significantly associated to the 1st choice of malaria treatment was the knowledge on malaria diagnosis. However other dimensions of knowledge on malaria, perception and malaria prevention had no association with the health seeking behavior.
Conclusion: It is suggested to strengthen the relationship between practices and policy, focus on capacity building of health personnel for early diagnosis and establish quality health care services.

FP-174

A Latent Class Analysis on Level of Satisfaction for Community Health Service in Urban Community in Shanghai, China

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Objective: The purpose of the study was to investigate the level of satisfaction for community health service among outpatients for improving service quality.
Methods: Data was obtained from a cross-sectional survey on clients satisfaction for community health service in 2007. This study focused on outpatients of 11 commuity health service centers (N=1,623). Latent class analysis was used to explore different levels of satisfaction.
Results: The majority of the subjects were female (53.1%) and adults who were over 40 years of age (76.8%). 70.3% subjects were willing to choose the community health center for treatment. 56.6% of these subjects stated "convenience" as the primary factor. Total satisfaction was 63.8%. A four-class categorization was exhibited the best fit with the data. Based on class characteristics, the classes were named "overall satisfaction", which mean subjects were satisfied with medical staff's attitude, doctor-patient communication, service mode and service content, "joint satisfiction with the attitude and content", "overall dissatisfaction", and "only no satisfaction with content". The family's economic situation was likely associated with the level of satisfaction.
Conclusion: This convenient primary health care service is provided for the middle-aged and elderly. The clients are highly satisfied with the medical staff's attitude. However, they are not as satisfied with the efficiency of service process, the efficacy of doctor-patient communication, nor with the amount of health education and rehabilitation. These three areas need strengthening.

FP-175

The Evaluation toward Primary Care Quality among Patients in Taiwan- Differences between Family Physician Groups and Non-Family Physician Groups

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Excellent primary care can reduce health care expenditure, improve health status, and diminish health inequity. However, there is still a lack of an evaluation tool to understand what type of primary care patients want in Taiwan. This study aimed to explore the primary care quality among patients in Taiwan and to identify the differences between family physician groups and non-family physician groups. This study selected 50 family physician groups and 50 non-family physician groups. Totally 4753 patients were selected for interview. Primary care quality tool was based on Primary Care Assessment Tool-Adult Edition (PCAT-AE) and modified by the concept of SERVQUAL. Because of the nested structure of the study sample, hierarchical linear modeling(HLM) was used in addition to bivariate analysis. According to factor analysis, primary care quality can be divided into 5 domains named as access, utilization, continuity, coordination, and comprehensiveness. Utilization was the highest domain in expectation and perception, whereas access was the largest gap among all domains of primary care quality. HLM results showed that there was no difference in expectation of primary care quality among patients. However, the perception was the highest among the enrollees in family physician groups and the lowest among patients in non-family physician groups. Patients expected their primary care physicians to be the traditional "healer", coordinator of care, health consultant, but prevention services were less expected. The results of this study showed that the family physician project of NHI was an effective policy.

FP-176

The Correlates of Influenza Vaccination among Poultry and Livestock Workers in Hualien

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Background: Taiwan started to perform Influenza Vaccinations for poultry and livestock workers in 2003. Even though government policy helped alleviate the financial barrier, the rate of vaccination has decreased progressively year by year.
Methods: The sample used consisted of 202 poultry and livestock workers in Hualien county. The author interviewed candidates using a structured questionnaire.
Results: Based on the sample, 35.3% of Hualien's poultry and livestock workers had never been vaccinated against influenza since 2003, and only an average of 7.4 % were vaccinated against influenza each year. The factors determined to be associated with influenza vaccination rates for this population are: education level, regular exercise, self-rated health, and high risk disease. Self-efficacy is the major independent variable in predicting influenza vaccination rates for poultry and livestock workers.
Conclusion: One should make use of the agricultural authority's channels in promoting the benefits of influenza vaccinations to the employer of registered poultry and livestock workers. Beyond sending postcard notifications, health authorities could set up a designated timeframe, such as holiday or evening clinic, to effectively and efficiently offer full-series vaccinations to poultry and livestock workers.

FP-177

Alcoholic Behavior of Street Boys (Anjal) in Makassar

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Based on data of Indonesia Social Department (2006) amount of street boys in Indonesia with high-risk behaviour until 144.889 children and a half of them is drug user (MOH,2007) The aim of this research is to explore perception and behavoir of street boys in Makassar about alcoholic beverage. This research is a qualitative reseach with phenomenology approach. Result of research shown that perception of street boys to alcoholic beverage is a 'drunk' beverage/ intoxicated drink and good for their body, refreshing and strenghten it. They are also consider that alcoholic beverage doesn't have any side-effect. The resource of information and the reason why street boys has alcoholic behavior is because a free life-style without any norms and rules on the street and also their social-group such as neighbour, 'hoodlums' or 'boss', that already be their 'family' on street, has an alcoholic behavior also., Another reason is why they choosed alcohol and wouldn't stop consumed is, the social-effect of alcohol is entertainning taking down their weary after finishing work, forgetting sorrow and become a media to gathering friends. The frequency in using alcohol is 2–6 times in a week, with 1–2 bottle alcoholic beverage. (1 bottle = 1L). In general, type of alcohol that use by street boys is ballo'. Ballo is one kind of traditional drink from South Sulawesi, made from Lontar fruit. The taste is sweet, but in big amount it will have alcoholic effect. This type is easy to get moreover often free from social-group among them, cheap and delicious. Alcoholic activities were doing at night after work, with social-group near from their work-place or in their home. Addiction effect had been emerged is nervous or restless and dizzy. Moreover, smoking is activity while use alcoholic beverage, beside of watching 'porn-movies' or destroy everything around them when they get drunk Participation from several parts is needed in solving street boys such as local govenrment of Makassar, Social Department and Health Department. This way should done by ratify of regulation about alcoholic beverage and regulation for control the hoodlums to cut the chain-link this problem. The last but not least, as a citizens we have to support and help the government in carrying out from street-boys problems.

FP-178

How to Promote People to Receive Colorectal Cancer Screening?

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Colorectal cancer (CRC) was the third leading cause of the cancer deaths in Taiwan. One of the most important preventative methods is to do colorectal cancer screening. But most people ignored the importance of colorectal cancer screening and the screening rate was very low. This study is to find out the most popular media and from which media people would like to receive the information of colorectal cancer screening. 383 subjects from hospitals, departments, stations, and MSN.net groups were enrolled in this survey and their ages were from 20 to 60 years old. The content of questionnaire included the demographic characteristics, the receiving modes of colorectal cancer screening, and the major media to get the information of colorectal cancer and screening methods. Data were analyzed by frequency and Chi Square test by SPSS 12.0. The colorectal cancer screening rate was 10.7 %. The rate of people having received information of CRC screening was 56.1% and it was 2.11 fold (p=0.02) of people without such information (43.9%). Only 39.7% subjects have received the information of CRC screening. People with the educational level under high school would like to watch TV, but people with more than college degree received health-relative information from internet (p=0.0001). 52.0% people aged 41-60 years old would like to watch TV to get health-relative information, and 40.9% people aged 20-40 years olds got those information from internet (p=0.003). Only 10.2% people in this study could not accept receiving the information of CRC screening from cellular phone text message.

FP-179

Physical Activity and Motor Abilities of Kindergarten Children in Okinawa, Japan

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The aim of this study was to estimate daily physical activity and to examine the association between physical activity and motor abilities of kindergarten children in Okinawa, Japan. Subjects were a total of 129 children (57 boys, 72 girls), aged 5-6 years at two kindergartens in Okinawa. Total energy expenditure (TEE-kcal/kg/day), activity energy expenditure (AEE-kcal/kg/day) and step counts (steps/day) were measured by using an accelerometer. Subjects were monitored over 8 consecutive days including a weekend. The motor abilities of children were assessed by a motor ability test including 25m dash, standing long jump, soft ball throw, popping, body supporting duration and ball catching, and the motor ability score was calculated. The mean TEEs were 69.7 kcal/kg/day in boys a! nd 70.5 kcal/kg/day in girls. The mean AEEs were 7.1 kcal/kg/day in boys and 6.7 kcal/kg/day in girls. The mean step counts were 14269.2 steps/day in boys and 12820.3 steps/day in girls. The TEEs were higher on weekdays than on weekends, but not AEEs and step counts. These were no significant differences in physical activity by sex and ages. The TEEs were associated with body supporting duration in boys. The AEEs were associated with body supporting

duration in girls. The TEE and AEE were associated with the motor ability score in girls. This study suggested that physical activity was partly associated with motor abilities in kindergarten children. Daily physical activity was partly associated with motor abilities in kindergarten children. Daily physical activity may improve motor abilities in kindergarten children.

FP-180

Development of Temple Health Promotion Model in Rural Area Thailand

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Background: Thailand health promotion aimed to all of sectors of social must participated to encourage health but in reality temples have no activities.
The objective: To set a role model of health promotion of their monks and people who came to temple.
Participant: Monks, Buddhist novices, municipal officer, public health officer, leader of community and people.
Setting: This model is established at Pho Tak temple located in Phiboonmangsahan District a small city which rural area in northeast region.
Duration: 2006-2008.
Study design: The participatory action research.
There were 6 stage studied : Stage 1st studied context of community and searched a problem , stage 2nd analysis and synthesized data , stage 3rd community brainstorming , stage 4th participatory planning and action ,stage 5th evaluation and synthesized experiences, stage 6th adjusted activities from evaluation.
Results: The health activities were found that pattern such as a meditation, alternative medicine , fire security, traffic safety, health education, health prevention, communicable and non communicable disease screening, environmental health activities and etc.
Conclusion: Health promotion in temple is proceeded gradually step by step under CPLFP model concept (clean, peace, local culture, folk wisdom, participation). An evaluation was measured both of quantitative and qualitative method used questionnaires, physical heath check, in-depth interviews, focus groups discussion and observations. The success or failure of activities could be found when considered each activities and overviews. Keys of success depended on community unity, participation, used folk wisdom, creative thinking, effort, systematic, clarify, and easily methodology for participant .

FP-181

Stress Behavior and Stress-Coping of the Disabled People in Two Provinces of Thailand

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Objective: To study the stress behavior and stress-coping of disabled people in two provinces of Thailand.
Methods: A cross-sectional survey conducted in 5,352 disabled people age over 15 years by multistage cluster sampling. Data were collected from April to June 2008 by interviewing questionnaires and analyzed by frequency and percentage.
Results: Most of the disabled people (62.6%) had normal level of stress, 25.6 % had moderate level and only 11.8% had high level. About 2.7% of disabled people felt desperation, 3.2% had lost of self-esteem, 2.1% had suicidal experience and less than 10 % had faced with the frequent stress symptoms. The way to cope with stress included staying alone (27.3%), calmness/praying/meditation (25.9%), doing favorite activities (20.1%) and seek for consultation (18.4%). Thirty percent of disabled people with totally dependent had moderate to high level of stress while 20% of those with partially dependent and 13.7% with independent had moderate to high level of stress.
Conclusion: Two-third of the disabled people had normal level of stress. Coping with stress were staying alone, calmness/praying/meditation, doing favorite activities and consultation seeking. To reduce the stress among the disabled people, empowerment of the individual's self-esteem and the strengths/supports from the community should be encouraged.

FP-182

The Development of Professional Law for Health Manpower in Sub-District Health Center in Thailand

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Background: Such enhancing requires legal supporting mechanism for health officials' performance. These officials are considered to be the important public health body that work closely to the remote rural community. It has been operating for about 95 years, no sign to enact the law or any other legal provision to control professional standard and professional ethics. In fact this group of people haven't legally recognized as "Professional".
Method: Data of the study were collected through documents involving professional law for health manpower so as to answer the research question of this study.
Results: As a result, the principle of Professional health manpower law in any sections of organizations and workplaces in Thailand are required at least 3 major elements ; 1. Having an advanced Knowledge about their existing job 2. Having chosen or established committees taking charge with their performance evaluation 3. Having the effective mechanism regulating their

professional standard and ethics.. But at present, there still is no legal recognition of their legal status as "Professional" in Thailand.
Conclusion: This study indicated that the staff members need a better and effective training sections according to the Thai existing law, there should be the specific legislation that accepts their as "Professional".

FP-183

Effect of Response Time Interval for Patients with Cervix Cancer

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Purpose: To examine the effect of the risk factors on the response time interval between diagnosis and first of treatment time of cervix cancer patients.
Design and Setting: Retrospective cohort study using the Taiwan Cancer Database (TCDB)registry--the Bureau of National Health Insurance (BNHI) linked database.
Patients: We studied all 18,898 patients who received a diagnosis of cervix cancer between 2002 and 2006 in the TCDB registry.
Main Outcome Measure: the factors related to the response time interval were analysis by multiple regression.

FP-184

Quality of Primary Care for Diabetes Mellitus: Perspective from Older Patients

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Background: Care of diabetes mellitus in older persons require an additional perspective to take into account impaired cognitive function, physical function and low education level for the elderly, `and difficulty in making lifestyle changes. Existing primary care in Hong Kong may not take these perspectives into account. A new community-based programmes for older persons with diabetes incorporating 3 domains: exercise prescription, diabetes care education and self-management techniques. A 30-minute group exercise was also conducted in each session.
Study Aim: The purpose of this study was to explore the perceived view on the new service model from the perspective of elderly diabetes.
Methods: Three focus groups of 14 participants from a governmental specialist clinic and a Church were conducted. Discussion was led by a guide covering two main areas: perspectives on the new service model; and suggestions for this new programme.
Results: All participants acknowledged the importance of self-management on their health and expressed the incapability of existing service to meet their needs. Majority of the participants perceived the new model beneficial on enhancing the self-management in the aspect of maintaining physical activity and healthy diet, awareness of the importance of controlling a stable blood glucose level, and reinforcement positive attitude towards living with diabetes mellitus.
Conclusion: This study provides insights into the attitudes facing elderly patients regarding the discrepancy between the existing health services and their needs. The findings of positive feedback on the new service model may add to the literature to address elderly special needs.

FP-185

Relationship of the Results of Between-Meal Food Mapping as a Teaching Tool Using It to Attitude and Behavior- Sakado Project on School- Based "Shokuiku"(Food and Nutrition Education)

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Purpose: This study aims to verify alteration of attitude and behavior after nutrition education by means of developing the between-meal food mapping as a teaching tool for food and nutrition education and surveying daily lifestyle and state of snack intakes between meals.
Subject: Subjects were 240 fifth-year children from 4 primary schools in Sakado city, who answered both of the between-meal food mapping and 'Life Habit Questionnaire' before and after nutrition education conducted.
Method: Cross tabulation, chi-square test, residual analysis of cells, test for difference of population means and one-way layout ANOVA were carried out for the seven attitude/behavior groups by sex, Rohrer index, nutritional type and nutrients. Wilcoxon's rank sum test was conducted before and after nutrition education.
Results: In the low group of communication, the number of severely overweight children was significantly large. The physical exercise & game group ingested "energy, sugar, salt and
lipid" the most. When they became the sixth-year students, the high group of TV and game time increased. This tendency was especially significant among overweight children After nutrition education, the high group of helping with domestic chores, the middle group of cramming school/lessons and the high group of breakfast intake frequency were significantly large in the high group of communication. The children who made good communication and willingly helped domesticchores ate breakfast well and often took physical exercise.
Conclusion: The nutrition education about snacks between meals is effective because frequency of drinking soft beverages decreased as a whole.

FP-186

Prevalence and Correlates of Physical Inactivity among Housewives

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Objective: To explore the prevalence and correlates of physical inactivity among housewives in Taiwan.
Method: A telephone survey was conducted using nation-wide samples of housewives aged 25 and older. Data were collected using computer-assisted telephone interview systems by stratified random sampling according to geographic areas. This survey (N=1,068) was conducted from January 20 to 24, 2009. The Chinese short version of the International Physical Activity Questionnaire (IPAQ) was employed to measure the level of physical activity.
Results: Roughly 25.9% of the subjects reported engaging in moderate or high level of physical activity, with 46.6% at a low level of physical activity or inactivity. Based on multiple responses, the most frequently reported barriers to exercise were having no leisure time(30.4%), having no partner and instructions (26.7%),and burden of being the family caregiver (26.1%). Multiple logistic regression analyses revealed that those with a Body Mass Index (BMI) of 18.5 to 24 (OR=0.50, 95%CI=0.27-0.94), and those with a BMI of 24 to 27 (OR=0.50, 95%CI=0.27-0.94) were significantly correlated to physical inactivity, after controlling for subjects' age, level of education, residential counties/cities, whether one's waist circumference of more than 80 cm, and television viewing time.
Conclusion: BMI were associated with physical inactivity. This study suggests that physical activity promotion strategies should be tailored to enhance housewives' willingness to exercise by different BMI value and age groups.

FP-187

Satisfaction of the Crisis Management Regarding Sanlu Melamine Milk Powder Incident among Internet Users

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Background: In 2008, the Sanlu milk powder was tested positive on Melamine. This incident revealed problems regarding food safety and health crisis management.
Objective: To explore the satisfaction regarding the crisis communication and management of the Sanlu melamine milk powder incident among internet users.
Method: A self-administered questionnaire survey was conducted using the internet website platform. The data were collected using the nonprofit website in Taiwan. The questionnaire included three major parts, namely basic demographic characteristics, information sources, and the level of satisfaction with the crisis management by the government. This survey was conducted from April 28 to May 9, 2009.
Results: A total of 406 participants were recruited in this survey. Among the participants, 52% were female, 85.7% were aged 20 to 29, and 57.6% were students. Nearly 43.8% of the participants did not satisfy with the honest degree of government to the public. Only 17.7% subjects were satisfied with the government announcements on the Sanlu Melamine news. Only 3.4% subjects thought that the government can resolve their confusing question about Sanlu Melamine milk powder. Generally, the subjects were in the dissatisfaction level with the crisis management by the government.
Conclusion: This study is the large scale investigation to explore the satisfaction with the crisis management and it points the importance of crisis communication and management by government.

FP-188

A Six-Year Retrospective Study on Childhood Obesity and Academic Performance

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Introduction: This study was designed to examine the relationship between childhood obesity and academic performance over 6 years.
Methods: Data were collected from one school in Taichung from the beginning of grade 1 in 2002 as the baseline data through the end of grade 6 in 2008 (n=409). Academic performance was extracted from the school records including language and mathematics score during grade 1 and grade 6. Weight and height were measured and the International Obesity Task Force criteria were used to determine weight status. Three groups were categorized as ‘Never overweight/obese’, ‘Became overweight/obese’, ‘Always overweight/obese’. Very few cases (n=9) went from being overweight/obese at grade 1 to not overweight/obese at grade 6. These cases were dropped from analyses due to the insufficient statistical power. Multivariate linear regression models for predicting academic performance were undertaken after adjusting for potential confounders, including gender, parental education, having siblings or not, whether the child belongs to single parent household, Intelligence quotient and absenteeism.
Results: There was 17.9% of boys and 12.2% of girls always overweight/obese and 16.9% of boys and 9.5% of girls became overweight/obese. Change in weight status over 6 years was not significantly associated with academic performance among either boys or girls.
Conclusion: This study provided additional support of the lack of independent association of obesity over 6 years, extending the understanding of the relationship between weight change and academic performance.

FP-189

Evaluation of Social Benefit from Regional Medical System- An Empirical Study on City of Kobe by Hedonic- Approach -

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Objectives: The benefit of health service system is characterized by two aspects. The first is the benefit of substantial medical service that derived from the supply of actual service. The second is a kind of "external effect" that is recognized as a "relief" of regional residents by ensuring medical service in the region. The purpose of this study is focusing on the latter side of the benefit and to estimate it statistically.
Methods/Design: We focused on city of Kobe in Hyogo prefecture in Japan. We utilized open data source of public announcement of land price and geographical information systems(GIS) to collect information of characteristics on social infrastructure or accessibility of traffic and regional medical condition. The total number of data was 317 samples. Based on the hedonic-approach, some regression models were constructed.
Results: It was suggested that the land price was marginally raised by adding the number of additional health care facilities near the land point. To the contrary, land price tend to drop by prolonging the distance from the nearest healthcare facilities. The coefficients of medical system external effect, which reflected the benefit of resident's relief was not less than that of some important characteristics as to infrastructure or convenience of daily life.
Conclusion: In summarize, health care system contribute to the regional society by its existence not only as the supplier of medical service, but also as the supplier of relief to the neighborhoods. We should re-evaluate this benefit.

FP-190

A Study of Patients' Knowledge about Carotid Duplex and the Related Factors among Patients Receiving Carotid Duplex

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The aim of this study was to understand patients' knowledge about Carotid duplex and its relationship with communication with their physicians. In addition, what and how the patients need to know about this examination were also investigated. The study was conducted with a cross-sectional design with structured questionnaires. The participants were recruited in the Carotid duplex room of a hospital located in Taipei area of Taiwan, R.O.C. During March to April in 2009, questionnaires from 252 patients were obtained and data were analyzed by t-test, ANOVA and Pearson correlation. About the knowledge regarding Carotid duplex, over 60% of all the subjects had correct responds. 95.6% expected to gain clear explanation about the result of Carotid duplex. Many wanted to gain the information from their physicians. In addition, data revealed positive communication behaviors in all dimensions of communication behaviors. Regarding the related factors, patients with higher level of education tended to have significantly higher knowledge. In addition, patients who considered communication behavior among patients and their physicians more positive tented to have significantly higher knowledge. To conclude, patients' knowledge regarding Carotid duplex was fairly high. Their appraisal of physicians' communication behavior of was also positive. However, they strongly requested clear information of the results from physicians. In addition, knowledge of Carotid duplex among patients with lower educational level should be improved. Better communication behaviors between physicians and patients should be pursued in order to improve their knowledge.

FP-191

Assessment of Hygienic Practices among Poultry Butchers, India

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Introduction – Hygienic practices of poultry butchers is important in maintaining meat hygiene and preventing the meat as vehicle for zoonotic and infectious diseases to keep community safe. This study was aimed to assess the hygienic practices of poultry butchers.
Methodology – Two poultry meat shops were randomly selected from each of the 57 wards of Patna city. Their hygienic practices of butchers were observed for one hour by principal investigator. Result – Among total 113 shops studied (One is missing), 31 % shops were in open space and 93.8% shops were located in market areas. Only nineteen butchers (16.8%) had washed the carcass before evisceration and fourteen (12.4%) after evisceration. Overall, only seventeen (16%) butchers had cleaned their knife before each new period of work (during the slaughtering process). None of them had disinfected the knife, cutting slab or floor and the protective equipments. The mean overall hygienic score was 17 (range 9, 33) out of the expected maximum of 69. Infrastructural facilities, water availability, having valid license and hygienic perception of the butchers were found to have statistically significant association with overall hygienic score. Workload, as measured by the number of chickens slaughtered per day, had a positive correlation with hygienic practices. (Spearman's rank correlation – 0.44, P= 0.000). Conclusion – Hygienic practices at the poultry butcheries in Patna (probably in other Indian cities too) were dismally poor. Ensuring adequate amounts of water, compulsory licensing and job training to butchers are the dare needs.

FP-192

Relationship between Drinking Water and Blood Arsenic Level with Hyperkeratosis and Melanoma in Buyat Village North Sulawesi Indonesia

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3. ASKLI, Indonesia
4. Dermatology, Indonesia
5. WOC, Indonesia

Objectives: Arsenic contamination of groundwater is a severe public health crisis in Buyat Village Kotabunan Sub-district, Bolaang Mangondow Regency, North Sulawesi Province Indonesia, where the population is exposed to arsenic in drinking water through tube wells used for groundwater collection. In this study, we explored the relationship between drinking water and blood arsenic levels with hyperkeratosis and melanoma on Buyat Communities.
Methods: The research used of baseline data from subject 108, which as 54 case and 54 control who were recruited into the Health Effects (Skin lesions such as, hyperkeratosis and melanoma). This study was Case control study on the health effects of arsenic exposure from drinking water in Buyat Village. We conducted analyses with Chi-Square and Odd Ratio. Results: We found a strong dose–response association with all measures of arsenic exposure in drinking water and hyperkeratosis & melanoma. Arsenic levels in drinking water from tube well of Buyat Village was about 0.01-0.104 mg/L (average 0.056 mg/L). A significance was observed between in drinking water and blood arsenic levels with p=0,000 (Odd Ratio = 19.44 95% CI: 6.52-58,00), blood arsenic levels and hyperkeratosis & melanoma with p=0.000 (Odd Ratio = 15,63, 95% CI: 4,94-49,40).
Conclusions: Our study provides insight into potentially modifiable host characteristics and identifies factors that may effectively target susceptible population subgroups for appropriate interventions.

FP-193

Workplace Violence from Citizens (3): Mental Health and Welfare Center

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Objective: To clarify actual circumstances of citizens' violence at mental health and welfare center.
Method: A questionnaire study was completed with the subjects of 66 mental health and welfare center.
Results: 62.5% of the questionnaires (43 cases) were collected. 76.7% of the respondents were public health nurses. 74.4% of the facilities discussed violence in advance, when violent situation was predicted. 41.9% reported that violent situations occurred. Victims were mostly public health nurses, and violence mostly happened during telephone counseling. 95.3% of the respondents reported that they could discuss violence at their workplaces without hesitation. 16.3% of the facilities had prepared violence prevention and protection management manuals. 23.3% of the facilities had carried out in-facility trainings.
Conclusion: The study disclosed a lack of prevention plans, even though violent situations were not rare and was predicted. Because the workplaces of mental health and welfare center have basis to create a violence prevention system, further promotion is needed to develop substantial systems.

FP-194

Workplace Violence from Citizens (2): Child–Welfare Consultation Center

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4. Tokyo Institute of Psychiatry, Japan

Objective: To clarify actual circumstances of citizens' violence at child–welfare consultation centers.
Method: Questionnaires were completed by 217 child-welfare consultation centers.
Result: 70.5% respondents answered the questionnaires. The respondents included 69.9% males and 30.1% female. The subjects' occupations included child welfare officer (73.9%), public officer (11.1%), and public health nurse (8.5%). 45.1% of the subjects received violence, and the child welfare officers were most frequently involved in violent situations. Psychological violence happened during telephone counseling, and physical violence mostly happened during home visits. Assailant included parents as well as children at temporal protection facilities. 97.4%% of the respondents reported that they could discuss violence at their workplaces without hesitation. 93.5% of the facilities had prepared violence prevention and protection management manuals when violent situation was predicted. Some concrete methods included "the number of staff," "interview place or method," "timing of police report." 43.1% of the facilities prepared violence prevention manuals, such as "self-defense and role play" and "complaint management," and practical use of them were limited to 22.2% of the facilities.
Conclusion: Violence were not only limited to physical, but also it could be threat, sexual harassment, and social violent using Information Technology. It is needed to

create a structure that has both safety management systems.

FP-195

Factors Influencing the Life Happiness among the Elderly Female in Rayong Province, Thailand

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Objective: To study the factors influencing the life happiness of elderly female in Rayong province ,Thailand.
Methods: A cross-sectional survey research was conducted in 233 elderly female aged between 60-80 years by multi-stage random sampling. The data were collected from June 6th to July 31st 2008 by interviewing questionnaires. Data were analyzed by frequency, percentage, Pearson's product moment correlation coefficient and Stepwise multiple regression analysis.
Results: About half (50.2%) of the elderly female had moderate level of life happiness, followed by low (27.1%) and high level (22.7%). The factors which significantly influencing the life happiness of the elderly female were self – esteem, social support, and family relationships (p–value < 0.05). In addition, self – esteem, social support, and family relationships could significantly predict life happiness of the elderly female by 91.4 %. Whereas self – esteem had the highest predictive power of life happiness. elderly female.
Conclusion: The important factors influencing the life happiness of the elderly female were self – esteem, social support, and family relationships. To promote happiness of the elderly female, the responsible organizations should establish the activities that enhance elderly's self-esteem and also provide sufficient social support, and good family relationships, to maintain their life happiness.

FP-197

Social Gradient in Health of Schoolchildren in Kazakhstan

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Background: The social gradient in health has been shown to be one of the dominant features affecting the health situation. This study attempts to examine the socioeconomic state and investigate the relationship between socioeconomic state and health and bad habits among schoolchildren in Kazakhstan.
Methods: The form based on the WHO for Health Behavior in School-aged Children Study, has been used. The Family Affluence Scale (FAS), with the higher level of family socioeconomic state - FAS 3, was used for indication of social inequality as well correlated with macroeconomic measures on national level. Binary logistic regression with comparison for odds ratios (OR) for the variables for socioeconomic determinants was done in Epi -Info Program 3.5.
Results: Odds rations for variable FAS (FAS2/FAS1 and FAS3/FAS1) show that chance for positive appraisal for health is higher in FAS2 groups. As for separate subjective complaints, the chance for appearance is lower in groups FAS 2 and FAS 3, then in group FAS1. We can not see strong connection between smoking and FAS and there is no strong connection between FAS and drinking.
Conclusion: Health of schoolchildren is directly influenced by socioeconomic state of the family. One of the reasons for more health complaints and worth state of health is low socioeconomic status.

FP-198

Subjective Dimensions of Squint

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Strabismus is a significant problem with considerable psycho-social effects on health. In cases of strabismus, in Austria coverage of costs is only given within the procedure of treating the medical relevant diagnose, no coverage of costs is given for „cosmetic" or subjective handicaps due to strabismus. However patients experience dysfunctionality, abnormality and social exclusion in all aspects of life. Strabismus affects one's social and economic status. Study design was based upon extensive history and narrative interviews. The findings of narrative interviews were consistent with those of patient history and showed that the physical dysfunctionality is not the main criterion for not feeling healthy, and that the consideration of social determinants and gender categories are critical for proper diagnosis and treatment. We recommend that medical professionals view the strabismus affliction in different ways through modified models of illness. These models are of utmost importance for qualitative health research. The model of P.-E. Schnabel corresponds with the experiences of the participants in our study. Schnabel's main focus is the transition from the state of health to illness and vice versa. There are patients who feel handicapped (subjective dimension), but who are not diagnosed by the medical professionals, since strabismus is usually an aesthetic concern; however, others perceive them as abnormal. Those who do not feel handicapped do not consult medical professionals, and are thus never diagnosed, but they are nonetheless seen as being abnormal.

FP-199

Gender & Health in the Asia-Pacific Region (APR): Impact in Education and Culture

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Even though life expectancy in females has improved in most Asia-Pacific Region countries has increased, however, the adoption of new lifestyle risk behaviours such as smoking, drug use, diet and sexuality are beginning to diminish these gains. The changes in teen adolescent behaviors in Asia are even more dramatic and damaging leading to increase in injuries even in suicides and attempted suicides. Despite improved access to care for women in cities, significant proportion of women are deprived from adequate care and its consequences in rural areas and slums. Women of minority and indigenous populations are even more disproportionately impacted for example, in access to screening and treatment for breast and cervical cancers. There is both delay in access to detection and treatment leading to the self-fulfilling perception of powerlessness of women to change their lives and health. Only quite recently was there consensus reached on the significant differences in perception and management of heart disease in women in the developed countries. This view is yet to percolate fully into the LDCs in APR. Methodology: This paper reviews existing gender relevant data in selected APR countries Indonesia/Malaysia; Sri Lanka/Thailand; Bangladesh/Myanmar in Adolescent Health variables (smoking, injuries), MCH data (Maternal Mortality and Teenage pregnancies) and to assess emerging risks for women in the APR region. Results & Conclusion: Priority for health of women is still lacking for certain common conditions; Coronary Heart Disease and in MCH complications - morbidity remains high even though mortality reductions are significant. The dramatic increases in risk behaviors in teens and young women are likely to have serious consequences for the future health of Asian women and their offspring.

FP-200

Wanhua Citizens Health Improvement: Empowering Positive Health Strategies for the Middle Age and the Aged Population

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According to the Taipei Health Bureau, Wanhua has the largest aged population in Taipei, which also presents disadvantages as caused by physical and psychological regression. Based on statistics in recent decades, the number of death and crude death rates of Taipei citizens has been increasing over many years. This is mainly related to Taipei's rising aged demographic structure. It also indicates that the rise is the main driver for the soaring number of deaths in Wanhua. In 2007, Wanhua's total death rate was 8.00/00 which is higher than Taipei's 5.65/00. The total death rate is an important index for both public health and district care work. Indeed, the Wanhua Promotion Committee (2008) has urgently recommended the empowerment of health strategies for the middle aged and aged population as follows: 1. Prevention and control plan of respiratory tract epidemic diseases (e.g. SARS, H1N1). 2. Establish the people's spiritual and mental care network plan. 3. Strengthen prevention and treatment of chronic diseases, as well as screening and control of related metabolic syndromes. 4. Promote healthy lifestyle, regular exercise, balance of diet and CPR for all. 5. Promote health service capacity, improve long-term care quality, and enhance health policy. These recommendations are intended to provide a platform for governments, the private sector, social organizations and communities to facilitate the middle aged and aged citizens participation in promoting their health issues and quality of life.

FP-201

The Impact of Family Attachment Programme on Medical Undergraduate Public Health Clinical Training to Appreciate the Social Determinants of Health

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Medical students of the Faculty of medical sciences, University of Sri Jayawardenepura, Sri Lanka were allocated in to groups of three students and assigned a household in the university project area for a period of two months during their final year clinical training of Paediatrics. The programme was supervised by departments of Paediatrics, Community medicine, Family medicine, Psychiatry and public health staff from the university project area. Weekly seminars were conducted to discuss the issues faced by each family and about any possible interventions that could be made to overcome them. Conventionally the undergraduate clinical training is hospital centered and mainly focused on relieving physical infirmity. But through this innovative programme we got the opportunity to consider the family as a whole with regard to psychosocial, economical and educational aspects and the overall impact of these factors on their health. Therefore, by recognizing and analyzing the problems and specific situations faced by them we were able to plan and carry out appropriate interventions, thus getting first hand experience on how to work in a practical setting. This programme proved to be a novel learning experience, both rewarding and enjoyable, and provided a gateway to broaden our understanding and appreciation on social determinants of health. Thus, including it in the undergraduate clinical training curriculum in addition to the traditional ward teaching is highly recommended.

FP-202

Influence of Breast Feeding Practices on Children's Speech, Language, and Cognitive Development

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Background: Breast feeding appears to advance IQ/cognitive development. Children with cognitive problems can show up in many ways, such as specific difficulties with language, academic and learning problems, especially for psychiatric, neurological and/or behavioral problems in late life.
Objective: To review systematically, on the existing literature, breast feeding that influence on speech, language and cognitive development in children.
Methodology: Databases of scientific literature were screened through the internet for publications that involved breast feeding effecting speech, language and cognitive development in childhood. Hard copies of related scientific journals were also sought for relevant topics by the authors, making use of reference lists of publications, and citation search. Studies were included if they were published since 1984 and investigated the effects of breast feeding that effect on speech, language and cognitive development in children. They were excluded if they are not original research articles.
Result: Fourteen studies were included for this review – a case-control study and thirteen longitudinal studies. Most studies demonstrated that breast feeding affect language and cognitive development. However, the effect of breast feeding on cognitive development was controversy.
Conclusion: It is concluded that breast feeding influence language and cognitive development, but inconsistency for cognitive development.

FP-203

Stroke Profile in Surabaya: Demographic Characteristics, Arrival Time at Hospital, Warning Signs, and Related Factors

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Background: In Indonesia, stroke is the leading cause of death either in urban or rural area.. Stroke death and handicap related to arrival time at hospital. This study aimed to describe stroke cases by demographic characteristics, arrival time at Hospital, warning sign and factors related to it.
Method: The survey conducted in Surabaya, the second big city in Indonesia. Samples were stroke cases of Surabaya inhabitants arriving in fours hospital in Surabaya which were selected randomly. Descriptive analysis of the variables and a Chi square test used to perform association between the demographic variables, warning sign and arrival time at hospital as dependent variable.
Results: Stroke affected people aged since 30 years old, whereas most of them (41.4%) aged 50 – 59 years old. Almost half of stroke cases (45.5%) had insurance for poor people and 90% of them lived with their family. The most risk factor of them (61.3%) was hypertension. However, half of stroke cases or less knew that they had either diabetes mellitus or hypercholesterolemia. The most of warning sings were weakness on one side of the body (80.2%) and sudden lack of coordination or difficulty walking (37.8%). And, only 27% stroke cases arrived in Hospital in 3 hours or less after stroke attack and factors related to it were male and vomiting.
Conclusion: Epidemiologic transition has being faced in Surabaya. Stroke affected people not only in high level of social economy but also poor people and most of stroke cases arrived in Hospital more than 3 hours after stroke attack.

FP-204

Self-Esteem in Lesbian, Gay, Bisexual, Transgender (LGBT) in Kathmandu, Nepal

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The descriptive cross sectional study was undertaken to determine the self-esteem in LGBT (N=100), Lesbian (n=20), gay (n=26), bisexual (n=21), and transgenders (n=33) to examine the correlation between various factors with the self-esteem.The self-esteem was found to be normal in 85% of the total study population with 8% high self-esteem and 7% low self-esteem. Of the total transgenders 84.85% is found to have the normal self-esteem and 9.09% have the low self-esteem.Out of gay 84.62% has the normal self-esteem;3.85% has the low self-esteem. Out of the total bisexual group 76.19% has the normal self-esteem;9.52% has the low level of self-esteem. When looking at lesbian group 5% has the low level of self-esteem with rest of the others 95% falls under normal range of self-esteem. Correlation was calculated using Spearman's correlation. Age, personal visibility, social isolation, showed no correlation with the self-esteem. Internalized homophobia, positive self identity, community network, cultural stigma showed a correlation with the self-esteem of which internalized homophobia and cultural stigma are negatively correlated. Out of the four groups of the study population, the median score of self-esteem score of the lesbian was found to be lowest 18.5 but the difference was not significant with the p-value 0.1310 by Kruskal-Wallis Test. More priority should be given in the programs like increasing the community network in order to heighten their perception about themselves and their values.

FP-205

Health Status and Associated Factors amongst Family Primary Caregivers in Taiwan

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Objectives: This study aimed to explore the physical and mental health of primary caregivers caring for disabled persons and detect factors related to health.
Methods: The household data of National Health Interview Survey 2001 derived from National Health Research Institution. The case-control approach matched on gender, age and education level. Family caregivers

who caring for disabled persons were defined as the case group, while the subjects in the family without disabled person were defined as the control group. This study compared the case group of the scores of Physical Component Summary (PCS) and Mental Component Summary (MCS) in SF-36 with that of the control group. Further, to analyze the factors of the characteristics of caregivers and disabled persons related to the health of primary caregivers.
Results: This study recruits 207 cases and 828 controls as the ratio of 1:4. The results show the mean scores of PCS and MCS in case group significantly lower than that in control group (PCS: 50.6 vs. 51.6; MCS: 46.2 vs. 48.5) and the related factors include job status, religion, and disability type (congenital or senile). Caregivers caring for persons with congenital disability lower level of mental health has, contrast to those caring for persons with senile disability have lower level of physical health.
Conclusions: This study provides solid data proving caregivers have the lower level of health status through the national wide survey, indicating the health issues of caregivers must be the top of long term care agenda.

FP-206

Physical and Mental Health among the Families of Patients with Psychosis– A Case-Control Study

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Objectives: This study compared physical and mental health of the families of psychotic patients with that of the families living without psychotic patients.
Methods: The secondary dataset of National Health Interview Household Survey 2001 derived from National Health Research Institution. The ratio of the number of case and control group was 1:4 and matched by gender and age. The former group was the families living with patients diagnosed as ICD9_CM code 290-299. The latter group was the families living without psychotic patients. The health was measured by SF-36. Owing to different subjects from the same household, this study conducted multilevel analysis to explore the physical and mental health in the case and control groups.
Results: This study recruits 563 cases and 2252 controls. The results reveal all the mean scores in 8 subscales of SF-36 of the case group (47.8-53.8) less than that of the counterpart (48.8-54.9). After multilevel analysis by controlling gender, age, marriage status, education level, religion, and household income, the difference of mental component summary score statistically signifies between case and control group, while there is no significantly difference of physical component summary score.
Conclusions: This study implies those who living with psychotic patients feel poor mental health. Therefore, the policy makers not only concern the health of primary caregivers of psychotic patients but also the health of the other families. It also emphasizes to advocate the national wide mental health campaign should be a top priority.

FP-207

Who Are Willing to Buy Long-Term Care Insurance?

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Objectives: The purpose of this research is to identify factors associated with the intention to purchase long-term care insurance.
Methods: Households were randomly selected using a automated dialing system and eligible respondents aged 50 or more were selected for telephone interviews. Information collected included demographic characteristics, health status, living arrangement, and views on long-term care.
Results: Results shows that the intention to purchase long-term care insurance was associated with being male, younger, higher level of education, and higher income. Furthermore, those who were financially prepared for long-term care expenses, and those who perceived themselves to be institutionalized were also more likely to have the intention of purchasing long-term care insurance.
Conclusion: The older respondent did not perceive the need to purchase long-term care insurance probably due to the fact that there were not financially prepared and were probably already made relevant long-term care arrangements. For the younger respondents, it appears that the likelihood of being institutionalized in the future and the availability of financial resources will affect the intention to purchase long-term care insurance.

FP-208

A Longitudinal Analysis of Retirement, Spousal Loss, and Self-Assessments of Health among Older Adults in Taiwan

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Objectives: An increasing attention in social epidemiological research has been paid to the profound impact of life events on health status change for older adults. This study examines the effects of retirement and spousal loss on longitudinal change in self-assessments of health among community-dwelling older adults from 1989 to 2003.
Methods: Data on this study for 1,388 older adults aged 60-64 in 1989 were drawn from the national representative sample in the Taiwan Longitudinal Study of Aging (TLSA). Self-assessments of health consisted of self rated health and psychological distress measured by a short version of the Center for Epidemiologic Studies-Depression Scale. Analyses employed generalized estimating equations models with five waves of the TLSA data.
Results: After adjusting for age, gender, education, ethnicity, and other baseline individual socioeconomic and physical health covariates, significant cross-sectional associations ($p<0.01$) were found between retirement and self rated health, with retirees reporting better health

status than the non-employed. Yet, aging decreases this positive effect of retirement. Analyses also showed that spousal loss before age 65 was significantly associated with higher levels of psychological distress and the magnitude of this relationship increased with age for older adults ($p<0.05$).
Discussions: Our findings suggest a positive, but not necessarily causal association of retirement with global evaluation of health as well as a negative, but possibly longitudinal association of spousal loss before age 65 with mental health decline. Programmatic strategies aimed at promoting health of older populations could particularly benefit from considering life transition.

FP-209

Unemployment and Psychological Distress

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In Japan, unemployment rate has increased (5.0% in 2009). Unemployment might affect mental health among Japanese, as it has been associated with increased suicide rate in Japan. The study objectives are: to 1) compare psychological distress among the unemployed and the employed, and 2) investigate factors associated with psychological distress among the unemployed, based on a national representative study in Japan. A large cross-sectional survey was conducted in 2007 of households and their members in unit areas randomly selected nationwide in Japan, with self-administered and interview questionnaires. Data of 19,006 respondents aged 18-64 were analyzed. Unemployment was defined twofold: those who did not have a job (n=1612) and who looked for a job (n=597). Psychological distress was measured by K6 scale with a cut-of sore of 5+. We compared the prevalence of psychological distress between the employed and the unemployed, adjusting for age, marital status, household income, chronic physical condition and treatment for mental illness for men and women separately; we conducted multivariate logistic regressions of psychological distress on these covariates among the unemployed. For men and women, for both definitions of unemployment, the unemployed had significantly greater risk of psychological distress than the employed, after adjusting for the covariates. Low household income and treatment of mental illness explained some variance of psychological distress among the unemployed. Conclusions Unemployment was associated with greater psychological distress in Japan, independent of income and medical conditions.
Acknowledgements Thank you to Akihiro Nishi, Masao Tsuchiya and Akiomi Inoue.

FP-210

Prevalence of Back Pain and Pain-Related Health Disparities in Hawaii

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Back pain has been recognized as having a major impact on personal well-being and health care costs, but reliable current data on back pain prevalence and disparities are scarce. This study evaluates the rate of back pain and its relationship to socio-demographic variables in representative sample for the State of Hawaii. In a random digit dial telephone survey (n = 1,573), 48.9% of the participants reported having experienced back pain at some point in their lives. Of those, 50.9% reported back pain in the previous 3 months with an average of 35 pain days (SD=37.5) and a mean perceived pain intensity of 4.6 (SD=2.1) on a scale from 0-10. While the mean number of self-reported sick days due to back pain in the previous 3 months was 2.0 (SD=11.1), participants reported that pain interfered with their activities of daily living (ADL) on a mean of 6.7 days (SD=20.7). Among the socio-demographic variables, pain was most closely related to ethnicity. While participants who self-identified as Chinese reported the highest number of days with pain, they also reported the lowest mean pain intensity. Native Hawaiians reported the highest pain intensity and the highest interference of pain with their ADL. The results of this study indicate that back pain is a highly prevalent and under-recognized phenomenon in Hawaii. More research is needed to evaluate its impact on quality of life, potential health disparities, and implications for prevention and treatment.

FP-211

Reliability and Validity of the Malay Version of Inventory of Socially Supportive Behavior (ISSB): A Study among Malaysian Women Diagnosed with Breast Cancer

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Background and objectives: This paper assessed the validity and reliability of the Malay Version of Inventory of Socially Supportive Behavior (ISSB).
Method: Sixty eight newly diagnosed local women were recruited from the university hospital and general hospital located in Kuala Lumpur. Patients were interviewed on a one-to-one basis.
Results: Mean age was 48.29 (sd=8.85) years old. Most of the women were diagnosed with stage two of breast cancer (56.9%, n=91) and were of Malay ethnicity. Test-retest evaluation was carried out at two phases which are at three weeks and ten weeks following surgery. Excellent internal consistency was confirmed with cronbach's alpha at 0.96. This version indicated small sensitivity to change with Effect Size Index (ESI) at 0.18 and low Intraclass Correlation Coefficients at 0.03. However, for the discriminant validity, no significant difference was observed between mastectomy and lumpectomy group.

Conclusion: The Malay Version of ISSB is a reliable tool and can be used to evaluate public health related issue (i.e. supportive behavior) among Malaysian population.

FP-212

Community-Wide Outbreak of Hepatitis A in Mongolia

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Background: Hepatitis A is a common infectious disease in Mongolia that accounted for 21.2 percent of all infectious diseases reported in 2007. Most cases of Hepatitis A have been occurred during a community-wide outbreak that was difficult to control. Objective: To identify risk factors for acute hepatitis A infection among children living in communities with the highest rates of infection during the community-wide outbreak. Design. A matched case control study. Participants. Study has been conducted in a capital Ulaanbaatar city between October and December 2008. One hundred forty two hepatitis A cases laboratory confirmed were selected from the National Center for Communicable Diseases using stratified random sampling. One matched control was selected for each case from the neighborhood of cases. A parent or grandparent of the children were interviewed to obtain the related information. In a total 116 schoolchildren, 90 kindergarten children and 78 children cared at home have been selected.
Results: HAV infection among children was person-to-person contact, and may have been an important risk of transmission within and between kindergarten, school and households. 22 percent of cases lived in a household where a previous case occurred. A statistically significant low hygiene was found among the cases ($p < 0.001$) and those with a lower education of parent's ($p < 0.03$).
Conclusion: During a community-wide outbreak, HAV infection among children was common, risk factor was difficult to control. It is necessary to highlight the importance of an immunization strategy against HAV in reducing the incidence of the infection.

FP-213

Intimate Patner Violence in Kathmandu, Nepal

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Objectives: To investigate the prevalence and socio-demographic background of IPV among general populations and squatters in the capital of Nepal (Kathmandu Metropolitan City). Methods: The study was designed as a questionnaire-based, cross sectional survey. The participants were 905 ever married women in kathmandu between 15 and 49 years old. Of them, 680 were randomly selected general population and 225 were selected from squatters living in Kathmandu. After calculating the prevalence of three forms of IPV (emotional, physical and sexual), association between the socio-demographic factors and each form of IPV was analyzed by maltivariate logistic regression.
Results: The prevalence of IPV was significantly higher among squatter population than that of general population. Among the general population, the prevalences of ever experienced of the emotional, physical and sexual IPV were 19.6%, 19.9%, and 5.3%, respectively, whereas the prevalences among the squatters were 29.3%, 33.8%, and 10.7%, respectively($p < 0.01$). We found that the following factors were significantly associated with emotional and physical IPV: the frequency of husband's drinking, early marriage, polygyny and lower economic status ($p<0.05$). In addition, the following factors were significantly associated with sexual IPV: the frequency of husband's drinking and lower economic status($p<0.05$).
Conclusions: In Kathmandu, wives in the squatters were at higher risk of being IPV victims. Not only the economic problem, a variety of the factors showed the association with IPV.

FP-214

Neighborhood Characteristics and Individual Health Under Korean Context

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Objectives: A neighborhood changes continuously because it is analogous to a living organism, which means that fluctuation of population movement, socioeconomic or socio-demographic qualities result in variation on a neighborhood. Therefore, the purpose of this study is to research which components we have to newly focus on in defining neighborhood characteristics especially fit into Korean society.
Methods: Using keywords with 'neighborhood characteristics' and 'health', the author searched and reviewed articles that contain various neighborhood qualities and health outcomes.
Results: There are 3 components to be considered as neighborhood characteristics. First, demographic structure, particularly elderly concentration is needed in consideration not as just an individual variable which has to be adjusted but as a neighborhood level variable. The reason is that it is inevitable a demographic structure in community would be changed due to rapid aging in Korea. Second, community capacity is getting more important in neighborhood than before. As people pursue well-being life, they try to build social connection and gather their capacity to change their surroundings into health promoting environment. Third, perceived neighborhood characteristics needs to be given more

weight in that subjective and objective characteristics reflect one whole community complementing each other.
Conclusions: It is not simple to maintain one's health, because there are so many environment factors which affect population through complicated mechanisms. Despite the importance of neighborhood contextual effect, there is little study related to the subject, so further knowledge should be developed in this area.

FP-215

Applying the Automatically Medical Information System to Manage Patient Admission Procedure information

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Objectives: As soon as patients got to hospital and handle admission formalities, the service offered by medical teams should be stepped in. Delayed-service will influence the treatment and result of patients' diseases. Attending physicians are the key persons to determine winning or losing.
Methods: This study used automatic computer transfer function to send new patients' hospitalized-messages to attending physicians, right after these patients finishing their admission formalities. Attending physicians could immediately know their patients being hospitalized and could offer related medical services as soon as possible.
Results: The time from patients in hospital to attending physicians seeing patients and the time of medical teams stepping in offering service are shorter in after-improved group than in before-improved group. The satisfactions of attending physicians, residents and nursing staffs in medical, surgery, pediatric, and obstetrics and gynecology departments are good. Conclusions: Successful medical service depends on well communication between doctors, nurses and patients. This study aims to offer attending physicians the instantly hospitalized messages of new in-patients and constructs a good communication platform for doctors, patients and team staffs.

FP-216

The Accessibility of Residents to Medical Institutions By a Network Distance Using Geographic Information System (GIS)

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Objectives: Although there are many arguments about the accessibility of residents to medical institutions, it seems difficult to fully understand its actual state to measure a straight line distance between them. The purpose of this study is to investigate the accessibility of residents to medical facilities by a network distance which traced roads using Geographic Information System (GIS).
Methods: In this study accessibility was defined as a network distance of a resident to closest medical facility. We collected geographic information about roads and residence locations which were open to the public in the city of Yokohama in Kanagawa prefecture. Those data were integrated and analyzed to calculate the number of residents in every 100m network distance.
Results: The results showed the differences of the number of residents in every 100m network distance compared to the previous method. The difference for internal medicine institution was approximately 67,000 persons in every 100m network distance and the difference for third emergency medical service center was approximately 60,000 persons in every 100m network distance.
Conclusion: Compared to the method of measuring a straight line distance, the method of measuring a network distance using GIS is very useful to understand the accessibility of residents to medical institutions.

FP-217

Thoughts, Feelings and Behaviours of Clients Attending Smokers Clinics in Malaysia

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Background: Unequivocal emotional commitment to stopping smoking and a clear rule involving abrupt cessation are predicted by the PRIME Theory of motivation to increase the likelihood of success at stopping. Objective: To assess the extent of emotional conflict and the prevalence of an abrupt quitting rule in clients attending Malaysian smokers' clinics. Method: 200 smokers attending five stop-smoking clinics in Malaysia were interviewed face-to-face using a structured questionnaire about their feelings on stopping smoking and whether they tried abruptly or gradually. Results: Abrupt (61.5%), rather than gradual cessation was common. Almost half of the respondents did not mind being a smoker (46%) apart from the health risks. A large majority (83.5%) reported that they enjoyed smoking, happy about the idea of becoming a non-smoker (70.5%) but almost half (48%) was worried that they would fail. Nearly half (45.5%) reported that they 'knew in their heart' that they would never smoke again. A significant minority of respondents had not been thinking about stopping before they heard about the clinic (32.5%). There appear to be differences in smokers' readiness to change at early quit attempts between those who had been seriously thinking and who had not.
Conclusion: A majority of smokers attending the clinics are conflicted about stopping but almost half are convinced at the start of the quit attempt that they will never smoke again. More than a third tries to stop gradually.

FP-219

Social Normative Beliefs Regarding Smoking among Vietnamese Adolescents

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Objective: This study investigates social normative factors regarding smoking in a school-based sample of Vietnamese adolescents
Methods: Subjects consisted of 2,000 Vietnamese high school students who completed a survey in 2008 about normative beliefs (perceptions the prevalence of smoking, disapproval by parents/peers, smoking among the successful/elite) regarding smoking. Iterative principle components factor analysis determined the underlying factor structure of the normative belief items and logistic regression identified specific normative beliefs associated with smoking behavior and susceptibility to smoking separately in the two populations.
Results: As hypothesized, the adolescents highly overestimated smoking prevalence among their peers. Of the three measures of normative beliefs, only parent/peer disapproval was independently associated with current smoking, ever tried smoking, and susceptibility to future smoking. Perceived prevalence of smoking was independently associated with current smoking and susceptibility to smoking only in the Vietnamese students, but perceived prevalence among successful/elite members of society was associated not associated with current smoking or susceptibility to future smoking.
Conclusion: The results among Vietnamese students are consistent with previous research showing that adolescents highly overestimate smoking prevalence. Youth smoking prevention program planners working with Vietnamese adolescents should consider assessing and taking into account normative beliefs and develop strategies that provide accurate information about the actual prevalence of smoking, the types of individuals who smoke, and approval/disapproval of smoking by parents and peers.

FP-220

The Impact of School Characteristics on Adolescent Smoking in South Korea

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Background: The smoking rate among Korean adolescent is increasing. Since adolescents spend most of their days in school, it is imperative that their health-related value and behaviors are largely influenced by school environment. While individual, family and peer factors have been widely studied by a number of previous studies on adolescent smoking, little attention has been paid to school environment factors.
Objectives: The aim of this study is to examine the environmental characteristics of schools as a determining risk factor of adolescent smoking in Korea.
Contents and Methods: Data are gained from the 3rd Korea Youth Risk Behavior Web-based Survey (KYRBWS) conduced by the Korea Center for Disease Control and Prevention (KCDC) in 2007. Student smoking is dichotomized to measure non-smoking versus ever smoking. School environmental characteristics include culture and organizational structures of the school. Multi-level logistic regression analysis is used to identify school environmental factors, with simultaneous adjustment of individual, family, and peer factors.
Contribution: When the school level risk factors are identified as an independent risk factor of adolescent smoking, this finding will be a useful resource for school smoking policies in Korea. The study will be able to suggest that individual- and school-level characteristics should be simultaneously considered in understanding adolescent smoking and other unhealthy behaviors

FP-221

A Study of Tobacco Hazard Investigation and the Effect of Health Educational Intervention among Elementary School Students of Aboriginal Countries in Nantou County

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The purposes of this study were to explore prevalence of smoking, source of cigarettes smoking behavior of their families and friends, and effects of a tobacco educational intervention on the knowledge of tobacco hazards, attitudes toward smoking, and self-efficacy among elementary school students in aboriginal area. The subjects were 796 fifth- to sixth-grade students from 32 schools in aboriginal area in Nantou as the population of this study. The data was collected via a self-administrated questionnaire in 2007. According to the result, the smoking rate among the students was 34.7%. There were 40.8% and 23.7% of them whose father and both parents smoked, and the major sources of cigarettes were from classmates or friends approximately 36.4%. Additionally, the tools of tobacco control educational intervention were developed by Bureau of Health Promotion. Total number of valid subject of the intervention was 228 and distributed the students into experimental groups and control group. In order to compare the effectiveness of the intervention, pro-test was administrated in one month after the program. In conclusion, smoking behavior of parents and peers and knowledge of tobacco hazards were the important factors which influence smoking behavior among the students; however, the intervention could significantly increase the knowledge and attitudes toward smoking among the experimental groups compared with the control groups in terms of immediate effect which result in reduction of smoking. Therefore, the intervention obviously increased the effectiveness of health education.

FP-222

Learning from Community Health Workers: Developing Traditional and Alternative Health Services in Rural Philippines

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Background: Community health workers (CHWs) specialized on alternative and traditional health care based in a rural area conducted an educational exposure in traditional wellness centers based in an urban metropolis. This study discusses their insights for the improvement of the management and organization of their project in order to expand alternative and traditional health care within their locality.
Methodology: Planning, preparation and educational exposure were performed by the CHWs themselves within the oversight of midwife and physician advisers. Triangulation of results from open-ended questionnaires and focus group discussion were conducted after to process experiences and derive generalizations and recommendations.
Results and Discussion: Participants discussed their roles, enhancing factors, challenges, and experiences in the planning, preparation and exposure proper. CHWs learned organizational and management principles, alternative health care benefits and techniques, and the advantages of continued education. Participants developed teamwork, interest in learning, perseverance, alternative health care techniques, and finance management skills among others.
Recommendations: CHWs concluded that expansion and sustainability of local alternative and traditional health care services require organizational and behavioral modifications and improvement of products and services. Continued education, research, promotion of product and services, sufficient resources, proper human resource recruitment, integration of the services within the target community, and political support are also crucial.

FP-223

Theory and Practice of Health Promoting School: A Case Study of an Elementary School in Hsin Chu City of Taiwan

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3. Ming Fu Primary School, Taiwan

This paper attempted to describe the role of a main advocate of health promoting school (HPS) and portray the overall health promoting school promotion progress on how students and teachers cooperately participated in HPS advocation in a school-based setting. The procedure not only documented how health promoting committee members discussed and decided the topics, course planning, and activities, but also described the progress of the members cooperating with employees of student affairs, students, and numerous volunteering subject teachers. During program execution, the members discussed the problems encountered and efforts put into overcoming the problems through continuous self-reflection. They also attempted to use the progress of this case study to assist HPS practitioners during their actual promotion.

FP-224

The Social Contract of Medical Professionals

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Purpose: The contract with society that medical professionals assume is the foundation that allows successful realization of professionalism. Though devotion to the profession has recently been more difficult for medical educators to inculcate in their students, in both global and local contexts, it is evident that tremendous efforts in curriculum reform are underway. Along this line, assessment of students' actualization of various obligations related to professionalism in the medical arena is important. This study therefore sets off to observe how medical students perceive their obligation to patients, society, organized medicine, and themselves, by the means of focus groups.
Design: Focus group interviews with four groups, 33 in total, senior medical students from five universities. Grounded theory is used as a guideline to code and formulate key constructs related to students' understandings of physicians' implicit contract with society. Comparative analysis with current literature on medical professionalism is finally applied.
Results: The results show that the interviewees clearly recognize their obligation to patients, including medical competence and skills and empathy. Their obligation to organized medicine, including participation and work for improvement, is also addressed. Their obligation to society in general is less evident.
Discussion: This study addresses the professional contract with society from the perspective of medical students. The significant disparity found between students' narratives and the literature on professionalism implies the social contract should be addressed in the future mission of medical education reform in Taiwan. To follow up, a subsequent quantitative survey with cohort study design is suggested.

FP-225

Historical and Epidemiological Study of Japanese Life Span

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It is appropriate to measure the health of a group by life span, the decrease of which is associated with cumulative stress. In Japan, life span in the prehistoric era was estimated to be 10-20 years old for both males and females because of a high infant mortality rate. Present day Japan is ranked the top country in the world for longevity. The three major causes of death in Japan are cerebrovascular disease, heart disease, and malignant growth, but the mortality rates for infections and parasitism are low. In developing countries, infections and parasitism are still the top causes of death. The following are thought to be factors resulting in countries such as Japan becoming an aging society: improvements in medicine, public health, and quality of diet. An examination of diet and causes of death in Japanese people in the past is believed to be very important when envisioning Japanese medicine and public health of the twenty-first century. Such an examination can lead to common findings between modern and ancient societies through archeological and anthropological studies which examine past events. This presentation describes the factors of longevity from the aspects of life span and nutrition of Japanese people in the past.

FP-226

Satisfaction and Factors Associated with Cancer Treatments in Taiwan

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Background/Purpose: Cancer is the top leading cause of mortality in Taiwan, and as a result, cancer treatments and patients' medical care satisfaction are given much attention. This study investigated the patients' satisfaction and factors affecting cancer treatments in Taiwan.
Methods: The subjects in this study were cancer patients who suffered from the ten cancers with the highest incidence rates. They were selected from five medical centers according to the ratio of the number of occurrences of the top ten cancers. Stratified random sampling was done at each hospital, and 1,204 valid questionnaires were collected through interviews. The associated factors of the cancer patients' overall medical care satisfaction were examined using multiple regression analysis.
Results: The average score of cancer patients' overall medical care satisfaction was 84.0 points. The patients were most satisfied with the physicians' attitude of service and professional competence, and the attitude of the nursing staff. On the other hand, the five categories which were the least satisfying included the accessibility of treatment, waiting time, psychological aid during the treatment process, aid with respect to religious beliefs, and the introduction of patient support groups. Bladder cancer patients (89.4 points) had the highest overall satisfaction score within the top ten cancer groups, followed by the prostate cancer patients (89.2 points). Skin cancer (79.5 points) and lung cancer (80.9 points) patients were the least satisfied. The factors affecting the medical care satisfaction of cancer patients included family income, length of sickness, hospital ownership, level of life quality being affected, cancer type, medical structure aspect, medical process aspect, medical outcome aspect, and medical support aspect.
Conclusion: Most cancer patients were satisfied with their medical care, but were less satisfied with the fulfillment of their psychological needs. Physicians should actively care for the patients' needs and recommend patient counseling in order to improve the level of satisfaction.

FP-227

Evaluation of Existence Value of Regional Medical Care Provision System by the Contingent Valuation Method

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Objectives: The concept of benefits is broadly categorized as two values: value based on use and value of something which simply exists without actually being used (existence value). The purpose of this study is to survey existence value of regional medical care provision system by the contingent valuation method.
Methods: This study selected the City of Yokohama in Kanagawa prefecture and questionnaire research was conducted. Total sample were 2000 and dataset was truly matched compared with the real constitutional ratio of sex and age. After confirming the basic statistics of the data set, the amounts which regional residents were willing to pay were estimated based on the open question method.
Results: If all residents could walk one kilometer or less from their present homes to at least one medical institution, it was estimated that the willingness to pay to reconstruct the regional medical care provision system is almost 3,000 to 3,500 Japanese yen per year. The amounts which regional residents were willing to pay for the establishment of this provision system varied according to the functions of a medical care institution and annual household income.
Conclusion: A high probability of using an actual medical care institution and annual household income had a great effect on the regional residents' evaluations of existence value of the regional medical care provision system.

FP-228

Study of Physicians-Patients Communication and Satisfaction among Patients Receiving Carotid Duplex

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The aim of this study was to understand the relationship of communication behavior between physicians and patients and their satisfaction when receiving Carotid duplex. The study was conducted with a cross-sectional design with structured questionnaires. The participants were recruited in the Carotid duplex room of a hospital located in Taipei area of Taiwan, R.O.C. During March to April in 2009, questionnaires from 252 patients were obtained and data were analyzed by t-test, ANOVA and Pearson correlation. Data revealed positive communication behaviors. Most patients considered that their physicians explained the processes and the purpose of Carotid duplex very carefully. And their physicians' attitudes were also positive. Most patients were satisfied with the explanation before Carotid duplex, waiting time, personnel attitudes. However, they were dissatisfied with the environment of the examination room and/or the interpretation of the results of the examination. Regarding the related factors, patients who were accompanied by family and/or those whose physicians were more experienced tented to have significantly higher appraisal of the communication behaviors between patients and their physicians. Patients who were females and whose physicians were more experienced tented to have significantly higher satisfaction of the Carotid duplex they received. To conclude, patients' appraisals of the communication behavior between physicians and patients and their satisfaction about the Carotid duplex were generally high. Physician's experiences may play important role in communicating with their patients and then may influence patients' satisfaction of medical care.

FP-229

Relationship among the Hospital/Physician'S Characteristics, Process of Care and Outcome in Curative Therpies for Patients with Hepatocelluar Carcinoma

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Hepatocellular carcinoma (HCC) is the second death cause of cancer in Taiwan, its incidence is increasing worldwide. However, few studies examined the relationships between the pattern of care measured by HCC core measure indicators and hospital/physician volume-outcome relationship for patients received HCC curative therapies. The study has examined the associations among hospital/physician characteristics, the pattern of care, and outcomes for patients with HCC via national databases. A retrospective cohort study was conducted of 2,114 HCC patients received curative therapies that had registry in Taiwan Cancer Database in 2004. The 2,114 patients were received care from 29 hospitals, and 1,548 patients were treated by 275 physicians. Also their three-year National Health Insurance claims data and three-year survivals were collected from respectively National Health Research Institute and death cause database of Department of Health. Relationships between hospital/physician volume characteristics, pattern of care, and 1-year/3-year survivals were assessed by X2, ANOVA, Log-rank test, and the associations among variables were assessed by multiple regression, logistic regression, and Cox proportional hazard regressions with accounting for potentially confounding patient characteristics. Hospital characteristics (including ownership, accreditation level, geography, and 3-year service volume), physician characteristics (including specialty) were identified to be significantly related to the pattern of care and outcomes of patients with HCC. Both hospital and physician characteristics are significantly related to survival outcome for patients with HCC. Besides, the diagnosis of pattern are also significantly related to 3-year survival outcome for patients with HCC.

FP-230

Factors Affecting Newborn Care Practices among Mothers in Rural Community of Nepal

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Globally, an estimated four million babies die every year before they reach the age of one month. Sixty percent of all neonatal death and sixty eight of the world's burden of prenatal deaths occur in Asia. The state of newborns in Nepal still compares poorly to that of almost all other developing countries. In Nepal traditional beliefs and practices dominate newborn care and are often hazardous. The primary care of newborns includes the proper practice of cutting the Umbilical cord. Traditionally, the cord is usually cut with razor blade, knife, sickle or even piece of wood. In some cultures, the cord is not cut until the placenta is delivered. Hospital data suggests that the major causes of neonatal death in Nepal are infection, birth asphyxia, preterm birth and hypothermia. More recent community based data present similar picture. The study design was one shot, cross-sectional, non-interventional and descriptive. Both qualitative and quantitive methods were used. The studies aimed to provide the information on factors affecting newborn care practices among mothers in rural community of Doti (far wester region) and Dalit (most disadvantaged ethinic group)of Salyan (mid western region). Non-probability purposive sampling method was used to select VDCs from Doti and 96 sample size was determined. In Salyan one VDC having high population of Dalits were selected and 78 sample size was determined.

Mean age of the respondents was 25 years and all the respondents were Hindu. There is no significant association between economic status of mothers and newborn care practices. Although most of the respondents were illiterate, there is significant relation between education status of mothers and newborn care practices. There is significant association between 4 ANC visit and newborn care practices and the repeated visits were higher in the women service provider and the distance of the health facility. There is very strong traditional belief and practices e.g untouchable system and it has significant relation with newborn care practices.
Both studies identified some harmful newborn care practices common in rural communities. Mostly education status of the mothers, counseling during ANC visit, parity, untouchable system were the hindering factors including negative cultural practices for the appropriate newborn care practices.

FP-231

Psycho Social Implications of Rheumatoid Arthritis in Rural Population

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Background : Chronic disabling illness like rheumatoid arthritis (RA) should be viewed not only as medical problem but also as psychological and social problem affecting working individuals and young females. RA lead to multiple disarray of family circumstances like loss of works and burden on family members leading to depression and unhappiness among family members. Social implications are loss of productivity, increased sickness-absenteeism, escalating treatment and rehabilitation costs. We evaluate our methodology of psychosocial interaction in combating this problem.
Methods and Results : 140 RA patients (10000 families in Veerapandi, Coimbatore, India) were studied during 2003-08 . The age range is 21-55 and 85% females. 72% belong to poor socio-economic group and 65% from joint family. The physical and psychosocial interventions are shown below. PHYSIOTHERAPY Heat Modality, Regular exercises, Joint protection and Assist devices PSYCHOLOGICAL SUPPORT Individual, family , group Counsellings and Motivation SOCIALINTERACTIONS Interactions with RA patients, Provision of amenities, Government Organizational aids, Leisure activities, Clothes, Support-walkers, canes and Social gatherings We found that 65% of patients (80 % females) could resume their work leading to improvement in family circumstances. 40% of them belong to joint family implying better psychological support at family and social levels (figure). The quality of social interactions and life improved with less absenteeism and family conflicts.
Conclusion : We found that multi-level interventions in form of physical and psychological interactions are mandatory for rheumatoid arthritis patients for better individual and family life and society as a whole.

Poster Session II

SP-001

Continuous Quality Improvement for Service Enhancement of Registered Nurses in Fort Prachaksinlapakom Hospital Udon Thani, Province Thailand

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This cross–sectional Descriptive study aimed to study motivation affecting the continuous quality improvement for service enhancement of registered nurses in Fort Prachaksinlapakom hospital Udon Thani province.The Simple random sampling was the sampling technique which randomise from 85 registered nurses in this hospital.The study was conducted between 1 December 2008 to 30 January 2009.The percentage,average and standard deviation were analysed the descriptive data. Moreover,Pearson Correlation Coefficient and Stepwise Multiple Regression were also used for answer the research question.The study found that the motivated factor and the support factor were high (3.81 (S.D.=0.47) and 3.72 (S.D.= 0.44)).The continuous quality improvement for service enhancement of registered nurses in Fort Prachaksinlapakom hospital Udon Thani province was 3.77 (S.D.=0.47).There were age,the experience were moderate significantly at 0.05($r = 0.354$ p-value=0.01,$r = 0.345$p-value=0.01,respectively). Furthermore,total motivation,motivation factors and hygiene factors were the positive relation significantly at 0.05 ($r = 0.705$ p-value < 0.01, $r = 0.662$ p-value< 0.001 , p-value < 0.001 and p-value = 0.005,respectively) which were 43.1% for incorporate prediction in continuous quality improvement for service enhancement.

SP-002

Impact of Global Warming and Climate Change to the Incidence of Malaria at Pacitan Regency East Java Indonesia

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To day global warming and climate change as the world main issues, its can influenced to human lifes. Global warming caused by mainly (80%) burn fossil fuels, such as coal, oil and gas and secondarily (20%) caused by cut down forest. Protocol Kyoto in the 1997 as the results of international commitment for preventing and managements of global warming and climate change. Developed country as Annex 1 country and developing country such as Indonesia as Non-Annex 1 country. The impacts of global warming and climate change, included vector borne diseases such as Malaria and Dengue Haemorragic Fever. Incidence of malaria in the reaserch area has trend increase. Nationally In the 1997 and 1999 incidence of Malaria increasing from 0.12%o to 0.38 %o respectively. And the 1998/1999 Indonesia has out break of Malaria at the 10 province (84 villages) a number of suffers are 19.688 person) and 71 person was die. At East Java province in the 1998, incidence of Malaria is 0.03%o and in the 2000 incidence of Malaria increase to 0.14 %o. This research used time series of ecological study method. The subject of research must equal population area. Localization of researh in the 4 district (32 villages) at Pacitan Regency East Java Indonesia. Variables included incidence of Malaria and environmental factor such as climate, rain fall, temperature, humidity, water river salinity and pH of lagun. Data analysis used discriptive and analytic . Results of the research are decreasing rainfall (increasing temperature) can increasing cases of Malaria. According to logistic regression test, that is significant result between increasing cases of Malaria and physical environment such as rain fall, water lagun pH and salinity. Physical environment index > 1.792 is high risk and physical environment index ≤ 1.792 is law risk Recomendation to be decreasing incidence of malaria that is the government should implemented of mitigation and adaptation method.

SP-003

Comparison of Height and Body Weight Children's and Teenagers of Ulaanbaatar and Rural Region

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Physical and biological development of children are unique parameters of health children's. The purpose of our work is to make compare of height and body weight children's, living in ecologically various regions of Mongolia. Methods of research: For anthopometrical research used the classical standard methods. We survey 3000 children on 4 regions of Mongolia and Ulaanbaatar. Results: Were lower height of boys surveyed aimag's at the majority age to compare with boys Ulaanbaatar's. Height of boys and girls East and Bulgan, Govi-Altay, Middle-Govi aimag's lower from boys Ulaanbaatar on 0,18sm-4,82sm. ($p > 0,05$).Height boys Ulaanbaatar's was higher on 4,82sm -4,45sm at 13-17 years of age. Body weight of boys Ulaanbaatar at 4,6,7,10-13year old were more, than body weight boys of others aimag's. After 14 years was more body weight boys Govi-Altay and Middlegovi. Body weight of girls were more of girls Ulaanbaatar at 4-7,11-12 and 17 years and at 8 years boys Bulgan and Govi-Altay aimag's on 1,1-2,01kg from other girls. Prevails the body weight girls at 9,10 years age girls Govi-Altay aimags, at 13-15 years-girls Middlegovi aimags, at 16-17 year -girls Govi-Altay aimags. Is similar body weight girl's at 17 years girls Govi-Altay aimags and Ulaanbaatar ($p > 0,05$) . Conclusion: 1. Boys and girls Ulaanbaatar at the majority of age were higher, than boys of others aimags. 2. Boys Ulaanbaatar's before 14year, girls before 12 year were with more body weight.

SP-004

Ambient Temperature and Mortality in Korea: The Effect of Pm10 in Elderly

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Extreme ambient temperature has been associated with increased daily mortality across the world. We describe the ambient temperature-mortality association adjusting PM10 for three cities in Korea, Seoul, Daegu and Busan, and identify a threshold temperature and the percent increase in mortality. We observed that threshold temperatures vary by the age and cities. We adapted generalized linear modeling with natural cubic splines to examine the association between daily mean temperature and total mortality in a threshold model. We also conducted a time-series analysis adjusting for day of the week, humidity, influenza and long-term time trend. The threshold temperature for all age was estimated to be 25.2°C – 28.6°C, during study period 2000-2007. For the daily mean temperature increase of 1°C above the thresholds estimated percentage increases in total mortality were 2.39 – 9.16 for all age group and 2.4-12.8 for elderly group. The threshold temperature for elderly (age above 65) was estimated to be 25°C – 28.7°C.We found higher percent increases for elderly rather than all age group. This study identified increased mortality due to exposure to elevated ambient temperature adjusting PM10. The importance of effects of daily mean temperature and age-specific threshold temperatures suggests that analyses of the impact of climate change should take special susceptibility of elderly to environmental risks into consideration.

SP-005

A Conceptual Framework for the Provision of Non-Local Based Emergency Medical Relief Service During Acute Emergency Phase Post Natural Disaster in Low & Middle Income Countries

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Background: Whilst an array of international/non-local health actors might be supporting medical relief actions and health system recovery during acute emergency phase post natural disaster in low/middle income countries, limited analysis has been conducted to examine the role of these non-local actors might have played in emergency medical service delivery. The goal of this paper is to review existing literature and evidence so as to conceptualize how these non-local attempts might have addressed population health needs and potentially assisted in the recovery of the disrupted health systems.
Methods: Literature review was performed by keyword search in PUBMED, MEDLINE and ELDIS during April-May 2009.
Results: Search results indicated a major gap in documented evidences and discussions to conceptualize issues around non-local health/medical relief activities during post natural disasters in low & middle income countries. Based on study findings, three different post disaster medical/health service delivery models were proposed to characterize the role of non-local health/medical actors and actions during acute phase post disaster.
Conclusion: Findings may assist policymakers and emergency response planners to maximize efficiency in natural disaster medical responses. It might also provide a decision making framework for non-local based health relief actors to evaluation their participations during early health sector recovery post natural disaster in middle/low income settings.

SP-006

The Effects of Virgin Coconut Oil in the Embryological Development of ICR Mice (Mus Musculus)

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Virgin coconut oil (VCO), a natural oil mechanically extracted from fresh coconut meat, boasts of various proposed health benefits. The study aims to determine the teratogenic effects of VCO on ICR mice and the anti-teratogenic effects of VCO on urethane-treated ICR mice. Forty nulligravid mice were synchronized of their estrus cycles. After which, they were randomly allocated to ten clusters of four mice each, with one male mouse for mating in each cluster. Random allocation to one of the four treatment groups: a negative control group treated with only water, a positive control group treated with only urethane, a VCO-treated group, and a group treated with both VCO and urethane, was done after copulation. VCO was administered through oral gavage daily from day 0 to 18 of gestation, at a dosage of 4.6g VCO/kg body weight. Urethane, was administered subcutaneously only on the 10th day of gestation, at a dosage of 1mg urethane/g body weight. On the 19th day of gestation, mice were sacrificed and hysterectomy was performed. Number of resorbed and developed fetuses was counted for each group. Only developed fetuses were analyzed for mean weight and observed for presence of developmental malformations. Results indicate that VCO is non-teratogenic in ICR mice as frequency of structural aberrations in VCO-treated fetuses was statistically comparable to fetuses of the negative control. VCO treatment significantly reduced urethane-induced cleft palate incidences and fetal

resorption, suggesting a protective action of VCO against teratogenicity and generalized fetal toxicity.

SP-007

What Make Doctors Suggest an End-Stage Renal Disease Patient with Multiple Organ Failures to Withhold Hemodialysis (HD)? A Comparative Qualitative Analysis

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Objective: End-Stage Renal Disease (ESRD) incidence in Taiwan ranked first and prevalence ranked second in the world from 2002 to 2005. Under the National Health Insurance, more ESRD patients with severe multiple organ failures undergo HD without regards to the quality of end-of-life.
The purposes of this study are: Firstly, to examine the conditions that doctors would suggest their patients to consider withholding HD. Secondly, to examine the conditions that doctors had suggested their patients to consider withholding HD but patients' family declined.
Methods: Eight nephrologists and ICU specialists were asked to provide detailed information about their ESRD patients without revealing names and ID. Thirty-one clinical cases were collected. The Qualitative Comparative Analysis (QCA) method was employed to analyze the qualitative data.
Results: The crucial factor associated with the condition that doctors would suggest patients to withhold HD is that they found the patient is in a combination of being in critical condition, presenting emotional problem, and with no family issue. However, when the patient is in a combination of being in critical condition, presenting emotional problem, yet with family issue, the family members of the patients would decline doctors' suggestion of withholding HD.
Conclusions: When a patient suffers from emotional problems, being in critical condition, aged and with no family issue around, patients and doctors would agree on withholding HD for a better quality of end-of-life. However, giving the same conditions, yet with family issue involved, shared decision-making is recommended to reach consensus and reserve better quality.

SP-008

Association between Body Mass Index at Different Age and the Risk of Dementia

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Background: Body mass index (BMI) change over lifetime and BMI at early age have not been investigated for dementia risk.
Method: This is a case-control study including 169 Alzheimer's disease (AD) patients, 97 vascular dementia (VaD) patients, and 215 controls from National Taiwan University Hospital and Cardinal Tien's Hospital from 2007 to 2009. BMI information was collected from medical records and questionnaires.
Results: People with a low BMI (<-5 kg/m2 was associated with a 2.24-fold risk of VaD (95% CI=2.24-4.70) as compared to those with BMI change>0.BMI change from age 40s to current age between 0 and -5 kg/m2 showed a 0.35 and 0.33-fold risk of AD and VaD (95% CI=0.18-0.69 and 0.14-0.80, respectively).
Conclusions: BMI at age 40 is a stronger predictor of AD and VaD than BMI at age 20 and current age. A U-shape association was observed between BMI change from age 20s or age 40s to current age.

SP-010

Premenstrual Symptoms among Thai Women

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Objective: To evaluate the prevalence and severity of premenstrual symptoms (PMS) among Thai women.
Method: A cross-sectional study was carried out among Thai women who lived in Bangkok, aged 18-45 years. One hundred subjects were asked to complete a questionnaire assessing premenstrual symptoms. The criteria of American College of Obstetricians and Gynecologists (ACOG) were used to diagnose premenstrual symptoms. The Women's Health Assessment Questionnaire (WHAQ) was used to evaluate the premenstrual symptoms and severity. The scoring system of severity from absent to strong is 0-4.
Results: Of the 100 subjects, 58% were diagnosed PMS by using ACOG criteria. The mean aged of subjects was 26.8 years. According to WHAQ six categories, during the premenstrual phase, the mean score of negative effect category was 4.5 +/- 4.2. The mean score of water retention category was 2.9+/- 2.4 and impaired concentration category was 3.7 +/- 2.1. The three additional categories which are increased appetite, felling of well being, and undesirable hair change had mean score 1.3+/-0.9, 1.6+/-0.9 and 0.2+/-0.1 respectively. The severity of symptoms was negative effect followed by impaired concentration and water retention.
Conclusion: High prevalence of premenstrual symptoms was found among Thai women in this study sample. The negative effect was the leading severity of PMS. Education, prevention and appropriate management for PMS are highly recommended to improve quality of life among reproductive aged women.

SP-012

Evaluation of Potent Dexamethasone-Suppressed Wound Healing Activity, Antioxidant and Anti Inflamatory Activity of Hyptis Suaveolens in Rat Models

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Dexamethasone plays an important role in retarding the wound healing process ranging from avascular/aseptic necrosis to attenuation of collagen synthesis at the site of injury. Dexamethasone can hinder quality of life in patients inevitably under steroid coverage. Ethanolic extract of Hyptis suaveolens has been shown to exhibit Dexamethasone suppressed wound healing, independent antioxidant and antiinflamatory activity. The purpose of this study is to examine whether or not Hyptis suaveolens extract could exihibit significant, wound healing in the dexamethasone challenged surface wound. The Study would expose the significant ROS scavenging and collegen synthesis potentiating property of this cost efficient pharmacological agent, to the scientific community. By using rat models for incision, excision and dead space wounds the protocol was standardized. Recruitment of standard antioxidant markers SOD, Catalase, Peroxidase and Hydroxyproline(OHP)determination protocols the above mentioned proterties of Hyptis suaveolens were substantiated. This report is one of the pioneering demonstrations which showed Hyptis suaveolens alcoholic extract bring about significant and expeditious Dexamethasone suppressed wound healing. This widely available herb extract also effectively scavenged ROS and provided the necessary anti inflammatory coverage promote immediate wound healing in the presence of a synthetic glucocorticoid in rat models.

SP-013

What Is the Need of Health Staff at Public Health Center?

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Objectives: The aim of the study was to analyze the needs of health staff at seven public Health centers in central Halmahera, North Maluku, Indonesia; to know the dominant diseases and outputs of public health center.
Method: The study was a qualitative and quantitative using a case study approach, conducted in April to July 2008. The data were collected through in-depth interview, documents and analyzed descriptively.
Results: The result of the study indicated that health staff was not distributed equally both in numbers and types. The highest number of health staff at Health center was 28 (24%) and the lowest was 3 staff (3%). The type of diseases were dominated by infectious diseases (upper respiratory tract infection, clinical malaria, skin disease, diarrhea, and lung TB). The ratio of staff per patient was 4-5. The total output of health center service activity was between 4.207 to 28.056 patients per annually.
Conclusion: The health staff need was to increase numbers and types of health staff. The infectious diseases were the big problem and become even more difficult to solve since the chronic disease also a new problem of the community at the rural area.

SP-014

Fauna Succession on Monkey Carcasses in Buried Condition in Forested Area, Ulu Gombak, Selangor State, Malaysia

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A forensic entomological study was conducted to study the post mortem interval (PMI) of buried carcasses in forested area. The study was conducted in Wildlife Research Centre of University of Malaya located in Ulu Gombak, Selangor, Malaysia. Monkeys (Macaca fascicularis, Raffles) were used as a model for human decomposition in this study. Initially, the monkey was euthanized by the Department of Wildlife and National Parks (PERHILITAN) of Peninsular Malaysia, Ministry of Natural Resources and Environment Malaysia. The study protocol was approved by Institute for Medical Research's Unit of Animal Care and Use Committee [ACUC/KKM/02(2/2008)]. After death was confirmed, the monkey carcasses were immediately clothed to simulate human cadavers. The monkey carcasses were buried in a well [2 ft (width) x 3 ft (length) x 3ft (depth)] and covered tightly to simulate cadavers being buried in the ground. The carcasses were monitored daily until no more larvae and body remains were observed. A total of 2 replicates were used. No flies were observed inside and around the well on the first 3 days. On Day-2 (Fresh), ants were observed attracted to the bloodstain of the carcasses. On Day-5 (Bloating), 3rd instar of Hypopygiopsis sp., Chrysomya pinguis and Chrysomya chani larvae were recovered. From Day-6 (Bloating / Decay) to Day-15 (Remains), larvae of Hypopygiopsis sp., Ch. pinguis, Ch. chani, Ch. villeneuve, Ch. rufifacies, Fannia sp. and sarcophagid were recovered. This study indicated that PMI was delayed at least 1 day on carcasses in buried condition.

SP-015

Effect of Different Length of Life Expectancy on Time Trade-Off and Standard Gamble after Traumatic Spinal Cord injury

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Purpose: This study was to evaluate the effect of different length of life expectancy on health utility, measured by time trade-off (TTO) and standard gamble (SG) methods in patients with traumatic spinal cord injury (SCI).
Methods: Patients with SCI were recruited in a 5-year period of from July, 1999 to June, 2004 by reviewing hospital records of 5 medical centers, with codes of International Classification of Diseases. Of 713 subjects who were registered, 270 completed the telephone interview. A structured questionnaire was used to collect demographics, injury-related characteristics, risk-taking propensity, TTO and SG. The TTO and SG were evaluated under three conditions of life expectancy of 10, 20 and 30 years, respectively.
Result: TTO values were significantly different among the three conditions of life expectancy and they were lower at longer life expectancy than at shorter life expectancy. On the other hand, SG values were not significantly different among the three conditions of the life expectancy. When the life expectancy increased from 10 years to 20 years, subjects who were young people, sustained injury less than one year, and had lower risk taking levels were significantly association with lower TTO values. When the life expectancy increased from 20 years to 30 years, higher Injury Severity Score values were independently associated with more changes in TTO scores.
Conclusion: Our study suggests that proportional trade-off assumption for the TTO is violated. On the other hand, SG values may be indifferent between different lengths of life expectancy.

SP-016

Application of Brain Tissue Oxygen Monitoring in Patients with Traumatic Brain Injury

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Purpose: The applications of brain tissue oxygen monitoring system in traumatic brain injury have reduction of mortality rate and improved patient outcome.
Method: This retrospective randomized-controlled clinical trial from January 01, 2008 to May 01, 2009. All subjects are moderate-severe traumatic brain injury patients with GCS 3-12, age greater than 17 years old, admitted to neurological critical intensive units in 6 medical centers. Case group used brain tissue oxygen monitoring system and intracranial pressure monitoring system Control group use only intracranial pressure monitoring system
Result: There are 60 patients included in this trial. (43 males and 17 females) Case group consists of 20 patients with mean age of 49.8± 24.1 years. Control group consists of 40 patients with mean age of 51.4± 21.5 years. This study shows when there is pulmonary complication in traumatic brain injury patients, continue use of brain tissue oxygen monitoring system to adjust FiO2 to increase PaO2 thus maintain PbtO2 can effectively preserve and improve pulmonary function. The mortality rate is 10% for the case group which is significantly lower than the control group with mortality rate 35% ($P< 0.05$). Evaluation of GOS/GOSE 6 months after the injury shows (67%) have better prognosis than the control group (35%). There is 32% difference between case group and control groups ($P< 0.05$).
Conclusion: Patient with brain tissue oxygen monitoring system continuously monitoring all parameters to maintain pulmonary function have better results on reduction of mortality rate and improved functional outcome.

SP-017

Preference Survey Results in Our Hospital

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Purpose: To aim at providing such solid food services that inpatients enjoy their meals and nutritious diets help early recovery from their disease, the following items were surveyed: quantity and quality of the meal on August, 2008, and usage of the dining hall and the tea dispensers installed in the hall.
Method: Subjects were all hospital wards of inpatients who were allowed to eat.
Results: There were 158 questionnaire sheets collected. The meal under this survey consisted of the followings: seasoned rice, deep-fried sliced eggplant for the main dish, vinegared salad for the side dish, and pickled, fruit, jelly or juice for the additional side dish. Focusing on respective wards, it was significant in the surgery ward that the percentage of the patients who ingested one third of the amount of the staple diet was largest. In addition, significantly more surgical patients remained the main dish than patients in other wards. In the pediatrics and internal medicine departments, there were significantly more patients who did not eat the side dish. Regarding occupancy rate, about 60 percent of patients used the dining hall and about 90 percent used the tea dispensers.
Discussion: The surgical patients ingested a little. We will continue to visit the ward frequently and keep communicated with the patients, their families, doctors and ward nursing staff to improve trophic conditions of the patients. They say that seasonally changing tablecloths and decoration in the dining hall creates good atmosphere. We continue to provide what patients are pleased at.

SP-018

Improving the Performance of Claims-Based Comorbidity Measures in Predicting In-Hospital Mortality

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Background: Comorbidity is an important controlling factor in health services research using administrative data. Our aim was to improve the performance of various claims-based comorbidity measures in predicting in-hospital mortality.
Methods: Five different comorbidity measures, including three different adaptations of the Charlson comorbidity index (CCI), one method developed by Elixhauser et al., and the Chronic Disease Score (CDS), were selected for investigation in this retrospective cohort study. New empirical weights were derived from Cox's regression models of all inpatients in 2001. The performance of comorbidity methods with new weights was validated and compared using the c-statistics derived from multiple logistic regression models among each of the following inpatients in 2002: AMI (n=8,961), type 2 DM (n=32,687), and CHF (n=15,972).
Results: We derived new weights for five comorbidity measures from 1,214,014 inpatients in 2001. For all the adaptations of CCI, some comorbid conditions had smaller weights than the original weights, such as rheumatologic disease, ulcer disease, hemiplegia or paraplegia, and AIDS, while dementia had larger weight than the original. The empirically derived weights of the CCI and the Elixhauser method outperformed than the methods with the original definition among each of study populations in 2002.
Conclusions: The findings of this study have indicated that CCI should be reassessed in cohorts with larger sample size. The empirically derived weights of CCI performed better than the original one, and suggest that the new weights should be used in further researches.

SP-019

The Association of Weight Status and Sedentary Time with Diagnosed Asthma and Respiratory Symptoms in Taiwan

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Objectives: The study aimed to evaluate the association of weight status and sedentary status with asthma and respiratory symptoms (RS) in schoolchildren in Kaohsiung, Taiwan.
Method: A questionnaire study elicited episodes of RS and data on lifestyle and anthropometric parameters in 1329 5th grade schoolchildren.
Results: Results showed that 12.4% of boys and 9.5% of girls had physician-diagnosed asthma whereas 15.1% of boys and 12.4% of girls had suspected asthma. Boys experienced more non-exercise-induced RS than girls (P<0.05). The number of RS was positively correlated with TV-watching time per day and self-reported sedentary time per weekend-day in girls (P<0.05). Underweight was positively associated with one of the seven RS in girls (P<0.05). At risk of overweight was positively associated with two of the seven RS in boys and one of the seven RS in girls (all P<0.05). The risk of having physician-diagnosed asthma and suspected asthma increased 93% and 72%, respectively, in schoolchildren at risk of overweight (P<0.05). Overweight was associated with a 78% increase in physician-diagnosed asthma (P<0.05). Higher sedentary time was significantly associated with more occurrences of one of the seven RS in girls (P<0.05). Higher body mass index was significantly correlated with longer TV-watching time per day in girls and longer self-reported sedentary time per weekday in boys (P<0.05).
Conclusion: Schoolchildren who are at risk of overweight or overweight and/or have more sedentary time have increased risk of RS and asthma. Weight and sedentary statuses of schoolchildren can impact on their respiratory health.

SP-020

Survival Analysis of Different Treatments in Patients with Advanced Oral Cavity Cancer from Administration Database in Taiwan

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Background: Oral cavity cancer has become one of the main causes of cancer-related deaths in Taiwan. Most cases of oral cavity cancer are squamous cell carcinoma, diagnosed at stage Ⅲ/Ⅳ. Besides of operation, "radiation therapy (RT)" or "concurrent chemoradiotherapy (CCRT)" are usually performed after surgical treatment. Several studies have discussed the prognosis of the patients under different treatments in western countries. However, there are few studies concerning the territory in Taiwan. This study is to explore this issue further by using the secondary databases of government.
Objective: To explore the RT or CCRT effect on the survival condition among patients with advanced oral squamous cell carcinoma.
Methods: A historical cohort method is adopted to conduct the study. After identification of newly operated advanced oral cavity squamous cell carcinoma from Taiwan Cancer Database (TCDB), the information will connect with the census registry, mortality registry and databases of the Bureau of National Health Insurance (BNHI) in 2004. The Cox' s proportional hazard regression was used to analysis the survival rate after adjusting the patient and hospital characteristics.
Results: The study will show the utilization and survival of patients with oral cavity squamous cell carcinoma after receiving post-operational radiotherapy or concurrent chemo radiotherapy in Taiwan.

SP-021

The Association of Obesity, Hs-CRP and Gene with Adult Asthma and Prognosis in A Hospital-Based Case-Control Study

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Previous studies suggested that there is an association between obesity and asthma, also indicated that adipose tissue from obese individuals expresses a number of proinflammatory molecules, such as CRP, which is considered to induce asthma symptoms. But the mechanism is still unknown. The CRP gene SNP is thought to be related to inflammation diseases. Our study is the first to discuss CRP gene and asthma. We determined the relationship between obesity, hs-CRP level and adult asthma. We also analyzed the risk of obesity, high levels of hs-CRP and interaction of CRP gene and obesity on asthma. This is a hospital-based case-control study. We enrolled 473 adult asthmatic patients from two hospitals in Taiwan and with 473 community-based controls. A significant association between obesity and asthma has been found. After controlling for confounding factors, the risk of BMI, WHR, waist circumference(WC) on asthma are 3.05, 3.20, 2.83. And the asthma risk for compared quartile 4 to 1 of hs-CRP level is 2.04. The interaction effects between CC genotype and central obesity with WHR and WC were 7.22 and 5.77 of OR on asthma compared to the CT/TT genotype and the normal weight group. The results show that obesity and high levels of hs-CRP could increase asthma risk. We didn't observe that obesity and hs-CRP are related to lung function, medication use or asthma severity. The interaction effects between SNP rs1205 CC genotype and obesity on asthma were observed.

SP-022

Survival Analysis of Embolization with or without Radiotherapy in Patients with Hepatocellular Carcinoma from Administration Database in Taiwan

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Background: 90% of liver cancers are hepatocellular carcinoma(HCC) in Taiwan. Transcatheter arterial embolization /Transarterial chemoembolization (TAE/TACE) is widely used in the treatment of unresectable hepatoma. For the tumor grown in the capsule, TACE/TAE with radiotherapy is used to eradicate the residual tumor cell to avoid the high recurrence rate in literature reports. However, there is a lack of reporting outcome of TACE/TAE with radiotherapy in the patients with hepatoma based on secondary database of government.
Aim: Comparison survival between TACE/TAE alone and TACE/TAE combined with radiotherapy for hepatocellular carcinoma.
Method: A historical cohort study was adopted to conduct the study. After identification of newly diagnosed hepatocellular carcinoma from Taiwan Cancer Database (TCDB), the information will linked with the census registry, mortality registry and databases of the Bureau of National Health Insurance (BNHI) in 2004. Then, the patients are divided into 2 groups— group A with TACE/TAE alone and group B with combined therapy of TACE/TAE and radiotherapy. The Cox's proportional hazard regression was used to analysis the survival rate after adjusting the patient and hospital characteristics.
Results: The study will show the survival of patients with hepatocellular carcinoma receiving TACE/TAE alone or TACE/TAE combined with radiotherapy in Taiwan.

SP-023

Estimations of Allele and Haplotype Frequencies of the HLA-A, HLA-B, and HLA-DRB1 LOCI Based on the Marrow Donors of TCTMDR

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Until 2005, a total of 56176 unrelated healthy Taiwanese individuals from the BTCSCC (Buddhist Tzu Chi Stem Cells Center) were typed for HLA-A, -B, -DRB1 at allelic resolution. In this study, we estimated the HLA allele and 3-locus haplotype frequencies among the majority of Minnan, Hakka, Mainlander and Aborigines ethnic groups in Taiwan. We found 51 HLA-A alleles, 121 HLA-B alleles and 53 HLA-DRB1 alleles in Taiwanese population. The heterogeneous exists among four different ethnicities. Take HLA-DRB1 for example, the most frequent HLA-DRB1 alleles in Minnan and Hakka were DRB1*0901 (15% and 16%) and DRB1*0301(both of 11%). In Mainlander, the most common HLA-DRB1 alleles were DRB1*0901(16%) and DRB1*1202(10%). For Aborigines, the most frequent HLA-DRB1 alleles(12%) were DRB1*1101 and DRB1*1454. 3-locus haplotype frequencies estimated by the Expectation-Maximum method. For Minnan, Hakka and Mainlander, the first two common haplotypes were A*3303-B*5801-DRB1*0301 (>5.7%) and A*0207-B*4601-DRB1*0901 (>4.3%). In Aborigines, A*3401-B*5601-DRB1*1502 (5.8%) was the top one haplotype which rarely occurred in other three groups. These results revealed high diversity of HLA alleles and haplotypes among the four ethnic groups in Taiwan. Principal component analysis and clustering analysis based on HLA allele frequencies suggested that Minnan, Hakka and Mainlander were more genetic homogeneous while the Aborigines is a characteristic group.

SP-024

A Survey of Outcome of Bariatric Surgery

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Bariatric surgery is a popular service for the weight reduction. This research intends to analyze demographic characteristics of bariatric surgery patients and effects in changing BMI (Body Mass Index). Secondary data is derived from patients' pre-operation assessment information from a regional hospital in southern Taiwan. The total number of study subject is 194 patients receiving bariatric surgery, which included 27 male and 167 female. The average age is 32.34 years old. The major group of occupation could not be identified from the data (45.4%) and the next occupation group is student (18%). More than half of their education level is above college (56.2%). Most of study subjects have no children (66.5%). 34% of study subjects express that they gained weight before 12 years old. Most patients have experiences in trying any mean to reduce body weight (77.8%). 56 study subjects (28.9%) had diseases related to obese. 143 study subjects (73.7%) have the family medical history. One or both of their parents are obese (57.7%). The average pre-operative BMI of study subjects is 38.27. The average percentage change of BMI at post-operation follow-up in first, third, sixth, and ninth month decreases by 9.4%, 18%, 29%, and 32% respectively. Among three different types of bariatric surgery, laparoscopic Roux-en Y gastric bypass shows better effect in reducing BMI. The result provides brief information of effects and patient characteristics of bariatric surgery for evaluating a new medical service in health service market.

SP-025

Sexual Risk Behaviors among Undergraduate Students in Nakhon Ratchasima Province, Thailand

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The purposes of this research were to study sexual risk behaviors among undergraduate students, Nakhon ratchasima province, and to study the related factors that caused sexual risk behaviors of the target students. The samples were 397 students in academic year 2008 which were drawn by multistage random sampling. The instruments for data collecting were chick-list questionnaire and percentage had been used. It was found that 56.4 percent of the samples had sexual relation. About 31.7 percent of them had their first sexual relation between 16-18 years. Most of them about 90.6 percent were their lovers or their boy/girl friends and 74.1 percent want to make relationship. Their first sexual relation without condom was 34.4 percent. Sexual relation with more than one partner was 73.7 percent . Sexual without condom together with alcoholic drink were found about 70.4 percent. There were three socio-psychological factors that caused sexual risk behaviors. Firstly, the family relation factor. Male samples of 35.2 percent did not make any consultation on sexual matters and 36.6 percent female samples consult their parents. Secondly, the influence of peer group factor. About 72.8 percent of the samples did not consult with close persons and 62.6 percent were invited to visit the sex service houses. Finally, the social behavior factor. They learned about the sexual relation from C.D. and videos, internet, and T.V. approximately 63.5, 61.7, and 59.3 percents respectively.

SP-026

Sexual Behaviour, Knowledge, and Attitude of Adult at Makassar City, Indonesia

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Objectives: The aim of the study was to observed the sexual health behaviour, knowledge and attitude of adult (15-25 years old), which very much related to the health prevention and promotion especially to sexual transmitted diseases (HIV-AIDS, Syphilis, Gonorrhoe, Clamedia).
Method: The study was a survey descriptive, conducted in April to Mei 2008 at five sub-districts, five villages, and 5 sub-villages within Makassar city, involving 100 adult samples. Results: 51% of the sample understand very well about the sexuality, 79% watched blue-movie, 60% masturbated or onani, 89% have boy or girl friend, 19% have sexual relationship which 76% out of them with girl or boy friend. Although 88% of the sample do not agreed with free sex, but 23% of them have ever got syphilis.
Conclusion: the sexual behaviour of youth in Makassar was very risk to get sexual transmitted diseases, such as HIV-AIDS, Syphilis, Gonorrhoe, and Clamedia.

SP-027

Body Weight Perception and Risky Slimming Behaviour of University Freshmen

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Background and Objective: For many young people, the desire of having a slimmer body distorts their perception of a healthy body weight. It also triggers the attempt to many risky slimming behaviours. This study aims at exploring the body weight perception among university freshmen in Hong Kong and the prevalence of using risky slimming behaviours. Study design Cross-sectional survey.
Method: Anonymous questionnaire was given randomly to entrants of a comprehensive university via admission package. During the compulsory health check, students returned their questionnaire which was cross-checked onsite. Body weight and height were measured using standardized method during the same occasion.
Results: A total of 1228 (53.8% female) students successfully completed the questionnaire. Among female students who were trying to lose weight, 78.4% of them were actually on the Normal (70.2%) and Underweight

(8.2%) weight categories. For those female students who perceived themselves as overweight, 66.4%of them were actually on the Normal (64.8%) and Underweight (1.6%) categories. Substantial proportion of these students were using inappropriate methods of losing weight include dieting (64.2%) , skip meals (27.5%), popular diet regime (10.9%) and diet plan from the Internet (4.9%). Some of them had experiences of risky slimming method include fasting, over-the-counter drugs, meal replacement and self-induced vomiting.
Conclusion: This study revealed a majority of university entrants have had wrong concept of healthy body weight despite their education attainment. Inappropriate and risky slimming methods were frequently practiced by this group of people.

SP-028

Health-Related Risk Perception among University Students in Sri Lanka

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Introduction: Public health depends on how laypeople perceive health-related risks. Individual differences in risk perception are related to regional, ethnic, socio-economic or gender distinctions. The purpose of the study is to understand how the university students in Sri Lanka perceive health-related risks such as infectious diseases and other socio-environmental events.
Methods: 1,774 university students were asked to identify the risk level of nineteen health-related risks with a four-point likert scale in two different situation: for individual and for society. The difference between risk perception for social and individual was analyzed using chi-squared test. T-test was used to examine the effect of socio-demographic variables on perceived levels of risks.
Results: Bomb blast was perceived as the most serious risk for both social and individual: the mean score was 2.53 and 1.98, respectively. In contrast, snake bite was the lowest for social and HIV/AIDS for individual. Social risks were significantly higher than individual ones in all 19 listed items ($p<0.05$). In addition, socio-demographic variables were associated with level of risk perception. Male had statistically higher risk perception than female, and students of Science faculties than Arts.
Discussion: There was higher risk perception for society than individual. It indicates that people tend to believe they are less at risk than the average person of society. In addition, socio-demographic variables had a significant influence on risk perception. It is desirable to take these characteristics into account when developing a school health strategy.

SP-029

Bachelor of Science in Health Promotion and Disease Prevention Studies

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Issues Since its founding in 1997, the Health Promotion and Disease Prevention Studies program at the University of Southern California has sought to improve public knowledge of public health issues, create a stronger public health workforce, and provide public health training to future clinicians. This paper describes the structure and mission of our program, the lessons learned about undergraduate public health education, and future plans for the program. Description The Health Promotion program is designed to provide undergraduate students with a critical, holistic view of health to broaden their understanding of public health and healthcare. Students learn about the socio-cultural, behavioral, psychological, economic, and biological factors that contribute to wellness and disease. Our program serves all students with professional interests in health. In addition to the HP major, the department offers six minors and three progressive degree programs in which students enroll in graduate courses while pursuing their undergraduate degrees. Program administrators have recently developed a Bachelor of Science in Global Medicine, an interdisciplinary major that focuses on understanding and investigating the factors that determine global health. The B.S. in Global Health is ideal for students who wish to work abroad in the future, as well as students who are interested in pursuing international relations and global policy issues with a focus on health and healthcare. Lessons learned Alumni have become physicians, dentists, pharmacists, researchers, health educators, lawyers, and health reporters, as well members of other professions. Many describe the program as valuable for the knowledge and perspective it

SP-030

Master of Science in Global Medicine Program

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Launched in 2008 by the Keck School of Medicine, the Master of Science in Global Medicine (MSGM) program addresses the urgent, worldwide need for training in global medicine among health professionals. This paper describes the structure and mission of our program, lessons learned about the needs of a global medicine education, and future plans for the program. Description The MSGM curriculum teaches students to analyze and address issues in global medicine, focusing on methods used to create solutions and responses to global health challenges. Students gain a strong medical science foundation as they focus on such topics as malaria, tropical disease, HIV/AIDS, and maternal and child health. The program is useful for students interested in

medical school, public health, or other areas of health outreach. The department offers the MSGM program as a progressive degree option for students in the Health Promotion and Disease Prevention Studies undergraduate program at the University of Southern California. Lessons learned In May 2009, the MSGM program graduated its first cohort of students. Most graduates had taken their MCAT tests and applied to medical school. Some graduates had plans to join the workforce in the health sector or in government agencies focusing on public health. Next steps The MSGM program continues to expand its course offerings and has experienced increased enrollment. Clearly there is a significant demand for professionals with global medicine perspectives, from medical schools, employers, and government agencies, and the MSGM program is positioned to continue training students to meet that demand.

SP-031

The Efficiency and Effectiveness of Computer-Assisted Instruction "Fun with Nutrition" for Prevention of Childhood Obesity

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The purpose of this quasi experimental research was to study the efficiency and effectiveness of a computer-assisted instruction (CAI) entitled "Fun with Nutrition" which was designed to prevent childhood obesity for grade 5th students. The research consisted of two groups and a pre and post test design. The sample was comprised of 247 students (134 in intervention group, 113 in control group), ages 10-12, who were studying at a private school in Bangkok. The intervention group received CAI in 5 chapters: childhood obesity, nutrition guideline, fat and sugar, vegetable and fruit and physical activity. The intervention was done weekly (40-50 minute class) for 5 weeks. Data regarding the characteristics of the students, nutritional status, nutrition knowledge, eating behavior, physical activity and students' satisfaction with CAI were collected. Independent t-test, paired t-test and Chi-square test were applied for statistical analysis.

The results revealed that students in the intervention group increased their knowledge after using CAI more than control group. But no change in the intervention group was found concerning eating behavior and physical activity. After the intervention, the nutritional status of students in the intervention group showed no significant change.

These findings suggest that the CAI was able to enhance learning achievement in students regarding childhood obesity and nutrition knowledge. However, subsequent stimulation by teachers and parents should be encouraged to improve the eating and exercise behavior of children.

SP-032

Student-Led Tutorials: Diversity and Creativity in Postgraduate Learning of Major Public Health Issues in Developing Countries- The MIPH Way!

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Since the inception of the Masters of International Public Health (MIPH) Program in 2000, the number of international students mostly from developing countries (Pacific Islands, Asia, Africa and Middle East regions) has significantly increased. Currently, nearly half are international students; 70% come from developing countries. Students' experiences range from highly experienced in the international arena having worked in their home countries/overseas to limited or virtually no working experience. As enrolments dramatically increased in 2003, effective learning tools had to be employed to maximize peer interaction and learning to address the needs of our culturally diverse student populace. Thus, student led tutorials were implemented. In 2000, the MIPH commenced with 13 students. To date, there are 123 students enrolled with about 45% being international students. Each tutorial group of allocated 10-12 students meet for 9 weeks; a student facilitates the discussion based on international public health issues generated from lectures and readings. Creative methods such as debates, problem solving case scenarios, role playing, educational games and mini icebreaker quizzes have been prepared and conducted by the students. This presentation looks at the impact of student-led tutorials in learning major public health issues within a developing country context and describes skills developed outside a traditional didactic method of teaching. It also describes the impact of student-led tutorials on the mentoring process and pastoral support of postgraduate students.

SP-033

Environment and Health Impact of Hot Mud Volcano in the Subdistric Porong, East Java Indonesia

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Subdistric Porong is located at Sidoarjo regency East Java.Indonesia, 20 km south of Surabaya. The Sidoarjo mud flow is informally abbreviated as Lusi, a contraction of Lumpur Sidoarjo (limpur is the Indonesian word for mud), is an eruption of gas and mud that has been going since May 2006. It is considered to be mud volcano. In the first stage of drilling, the drill first went through a thick clay seam (500-1,300 m deep), then sands, shells, volcanic debris and finally into permeable carbonate rock. At this stage the borehole was surrounded by a steel casing to help stabilise it. A second stage of drilling began and the drill string went deeper , to about 2,834 m (9,298 ft). Unportunatelly at that time without a protective casing, after which water, steam and a small amount of gas erupted at a location about 200 m

southwest of the well. During the eruption hydrogen sulphide gas was release and local villagers observed hot mud, thought to be at temperature is around 60o C (14Oo F). Because of the second stage of drilling without a protective casing, the most likely cause of these hydraulic fractures was unprotective drill string in the second stage of drilling. The impact of these volcano such as physical, biological and health impact. The aim of the research are identification of the impact of hot mud volcano to the community health and environment. Method of the research is the observation study included cross-sectional study. Primary data that are quality of air, hot mud volcano, environmental condition (building status) and health status. Secondary data included health status of the people living in the research area and physical environment condition in the research area. The research analysis by descriptive method. Results of the research are identified symptoms of the H2S exposure, skin symptoms because of mud contact , respiratory symptoms impact and also the environmental impact included physical and biological impact. The subcidence range 30-100 cm and building disorder is about 22%. Water and Air pollution such as concentration of HC is 55000ppm (standard 0.24 ppm), NO2 is 0.116 ppm (stadard 0.05 ppm), Cl is 2896.63 mg/L (std 600 mg/L), Cd is 0.15 mg/L (std 0.005 mg/L) and Mn is 5.14 mg/L (std 0.5 mg/L). The disease dominated by respiratory infection, neuritis, gastritis, skin infection and diarrhea. Impact of vulcano was managed by spesific method.

SP-034

Morbidity and Mortality of Multidrug Resistant Tuberculosis in Mongolia

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Introduction: Mongolia is one of the countries with the highest prevalence of tuberculosis in the Westren Pacific Region. In the recent years the spread of multidrug resistant tuberculosis (MDR-TB) emerges challenges in TB control in most countries including Mongolia. The aim of this study was to investigate the incidence of MDR-TB since the introduction of drug sensitivity testing in 2003.
Materials and Methods: A descriptive method was used in this study and information regarding the patients were abstracted from official report.
Results: Totally 419 MDR-TB cases (1.6 cases per 10 000 population) have been registered during 2003-2008. More than 60% of MDR-TB cases were reported in capital-Ulaanbaatar city. An average age (±SD) was 32.3±10.9 and people aged 16-44 years were mainly (85.5%) affected with the MDR-TB the majority of whom were men. While only 63 cases (15%) were registered in 2003-2005 the remaining (85%) were reported in the last 3 years, probably due to increase in the incidence of MDR TB as well as better screening. Only 43% of all MDR TB patients have received treatment whereas 32% died prior to the treatment. High proportion (61.8%) of deaths among MDR TB cases have been reported until 2006 that decreased to 22.3% after opening of the special ward in central TB clinic.
Conclusion: In conclusion, MDR TB has been increasing in Mongolia and treatment should be started immediately after the drug sensitivity test to prevent from further disease burden.

SP-035

H5N1 Virus and World System Theory: The Case of Indonesia

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World-system theory is a macrosociological perspective that seeks to explain the dynamics of the "capitalist world economy" as a "total social system." The system divides the world (economy) into three zones: core, semi-peripheral, and peripheral countries. Chirot (1986) lists the five most important benefits coming to core nations from their domination of periphery nations: access to a large quantity of raw material, cheap labor, enormous profits from direct capital investments, a market for exports, and skilled professional labor through migration of these people from the noncore to the core. The blood sample that contains H5N1 Indonesian strain could be counted as raw materials that have enormous economic value especially for medical industries. The paper discuss that the case is actually part of the theory in practice.

SP-036

Prevalence and Risk Factors of Intestinal Parasite Infestation among Hilltribe Student

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A cross-sectional study of prevalent rates, risk factors and re-infection rate of intestinal parasitic infestations among hill-tribe schoolchildren. Target populations were level one to level six primary schoolchildren who attended ten Border Patrol Police Schools in Chiang-Rai province, Thailand. Three hundred and thirty nine subjects were recruited by simple random sampling out of a total population of 2,194 children. All three questionnaires were tested for validity and reliability. Stool specimens were examined qualitatively and qualitatively for intestinal parasites using cellophane-covered thick smear technique. Unconditional multiple logistic regression at $\alpha = 0.050$ method was applied to statistical analyses.
Results: subjects were 51.92% male, 48.08% female, 31.2% Akha, 30.38% Kmong, 66.08% Buddhist, and 33.92 Christian. Prevalent rate of parasitic infestation was 9.75%, of which 7.97% was from Ascaris lumbricoides, 0.88% Hookworms, 0.29% each of

Trichuris trichiura, Enterobious vermicularis, and Taenia solium. Re-infection rate was 0.00% at one and three months after treatment with a single dose of 2 tablets of albendazole (200 mg). Only one risk factor for intestinal parasitic infections was identified after controlling for confounding factors of age, sex, parents' education levels and occupations; which was the source of the child's household drinking water. Those who drank water from wells had an increased risk of 9.83 (ORadj=8.22 95% CI 0.93-104.12), while those who drank from piped mountain water was 8.22 (ORadj=8.22 95% CI 1.07-63.18) as compared with drinking only commercially bottled water.
It is concluded that an improvement of the quality of household drinking water is essential to the prevention and control of primary schoolchildren attending Border Patrol Police Schools in Chiang-Rai province, Thailand.

SP-038

Risk Factors Tb in South Sulawesi Indonesia 2007

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Lung tuberculosis in Indonesia are predicted 450,000 cases with 175,000 victim. It is predicted that nationally incidence rate is about 130 people with sputum BTA (+) among 100.000 people. Based on Basic Health Research Survey in 2007, it was found that the prevalence of lung tuberculosis was 0,99%, detection rate was 53% of 70% national detection rate that shows the risk of transmitted in community is still high. Aim of the study is to investigate related factor of lung tuberculosis in South Sulawesi province in 2007. It consists of age, sexes, educational background, job, nutrient status, domicile, and smoking habit. The research design is cross-sectional involving 41.641 samples with 110 samples suffered lung tuberculosis. Source of data are the result of Basic of Research Survey, 2007 conducted by Indonesia Health Department. Then data are analyzed by SPSS and statistical test is using Chi square and logistic regression. Base on statistical test it is found high correlation of nutrient status (p=0.000) (Exp B = 3,180), age (p=0,000, sexes (p=0,000), educational background (p=0,001), job (p=0, 28), domicile (p=0,047), smoking (p=0,002) with the incidence of lung tuberculosis. Suggestion, the prevention and promotion of lung tuberculosis should been improved, particularly on improving nutrient status of community.

SP-039

Brucella Melitensis Antibody Prevalence in Goat Farmers Who Had Contact with Infected Animals in Four Districts of Kanchnaburi Province, Thailand

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Brucellosis is one of the zoonoses caused by Brucella melitensis which is related not only with agriculture but also with the public health field. The disease can be transmitted from animals to humans via several routes. Humans who are infected with brucellosis show many signs, symptoms and pathogenesis such as undulant fever, orchitis and abortion. The risk group is persons who have contact with goats, which may be infected with brucellosis.

This study utilized a cross sectional analytic design. The objectives were to find the prevalence and risk factors of Brucella melitensis seropositivity in goat farmers from different size farms where positive Brucella melitensis was found in goats. The research was approved by the Human Ethical Review Research Committee. Blood samples were collected and tested for related variables. Serum samples were tested for B. melitensis antibodies using Rose Bengal Test (RBT), CFT, EDTA-Tube Agglutination Test (EDTA-TAT), Indirect ELISA IgG and IgM against B. Melitensis. Univariate by Chi-square and multivariate by multiple logistic regressions were used to analyze data with significant statistical difference (P-value < 0.05).

On 45 farms that were tested, 172 goats were found to be positive. Of the 70 goat farmers that had contact with the animals, 18 tested positive (prevalence 25.71%). Using multiple logistic regression, no significant associations were found between factors associated with positive antibody. However, when using univariate analysis a positive significant (P-value < 0.05) association was found for those who cook goat meat (P-value = 0.011).

Results showed that positive prevalence of B. Melitensis in goat farmers in contact with infected goats was two times higher than positive goats. Results of this study will be useful in planning for control and prevention of brucellosis in goat farmers by prevention of infection transmission of the disease from goats to humans.

SP-040

The Limitations of International Health Regulation 2005- The Timeliness Gap of Global Surveillance System

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Objectives: Disease knows no borders. For the increasing awareness of the importance of disease surveillance, prevention and control, the WHO--the preeminent governing body of international health, established the Global Outbreak Alert & Response Network (GOARN) in 2000 to keep the international community alert to the threat of possible outbreaks. Furthermore, the revised International Health Regulations (2005) of WHO went into infect in June 2007 with the aim of enhancing

national, regional and international public health security. However, from the difficult position of Taiwan during SARS caused by political issue which remains excluded from participating in many international meetings reflected the insufficient function of this system. So the object of this study is to identify the limitations of the WHO's GOARN and the implications of the IHR (2005). Method: We conducted a comprehensive survey of outbreak reports from the WHO surveillance system, and matched report from ProMED-mail --an unofficial, non-governmental monitoring system with the aim of providing an early warning system for outbreaks of emerging diseases-- to find the timeliness gap between these two systems. And we further found out the association between democracy and the timeliness gap. Results: The disease outbreak report of ProMED was earlier than of WHO, and the timeliness gap between these two systems was averaged to 10 days. Also, the timeliness was associated with the medical capacity and the democracy level of the nations.
Conclusion: Though IHR (2005) try to eliminate the gap of the global infectious disease network, but the limitations of it still remained by the political issue.

SP-041

Estimating Population Size of Endangered Deer TB in Korea

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The Republic of Korea is the country consumes the above 85% of world-wide deer antler production volume. The annual amount of consumption reaches to 1,600 billon won ($ 1,300 million). The Breeding number was 50,000 in 1990, but it became 150,000 as three times as 1990's, and about 100,000 are bred to recently in Korea.Since bovine tuberculosis was first detected among 22 deer in 2005, 238 were reported in 2008, recently, 159 were reported until 2009 May. The occurrence area is also extended. It is a number which it accomplishes to the 0.25% of whole breeding number. At first, incidence cases were reported from Cheon-buk province (southern area of Korea), however bovine TB in deer has been spread to Gyeong-gi province (the central area of Korea). The deer is maintenance host of the bovine TB (Mycobacterium bovis) which is a zoonotic infectious disease. Consequently, the deer tuberculosis can infect human through oral/ gastronintestinal transmission by ingestion of deer antler and deer blood or respiratory/ cutaneous transmission to veterinarian and farmer.Particularly, the death cases from TB (respiratory TB and other TB) was suddenly increased from 2000 to 2002, when the deer breeding number also reached the peak. For these reason, the purpose of this study is to estimate the endangered population of TB infection in Korea from the correlation between TB incidence and ingestion of deer antler and deer blood.

SP-042

Tooth Loss and Associated Factors in Urban Khon Kaen Thai Adults

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Tooth loss is an important oral health problem affecting Thai people and people of other nations as well. Not much of epidemiologic evidence concerning factors associated with tooth loss among Thai people has been reported although severity of tooth loss among Thai people still exists. This study evaluated relation between tooth loss and several variables among the Thai people residing in Khon Kaen Province, Thailand during the year 2006. The study subjects included 858 males and 303 females, aged 18-72 years, who volunteered to take part in the study. The data were obtained through oral examination and interview. Results were employed by means of descriptive, bivariate, and multivariable Poisson regression analyses. The results showed that approximately 53.2 per cent of people experienced one or more tooth loss. Findings from the final multivariable Poisson regression model showed that decayed and filled teeth, systemic disease, older age-group, female gender, higher education, higher income, occupation (military recruits) and the interaction between gender and income were significantly related to tooth loss, with the odds ratio (95% CI) being 2.04 (1.74, 2.42), 1.16 (1.01, 1.33), 2.27 (1.78, 2.93), 0.65 (0.52, 0.80), 0.90 (0.84, 0.95), 0.47 (0.31, 0.71), 0.13 (0.09, 0.20) and 1.42 (1.09, 1.86) for decayed and filled teeth, systemic disease, older age-group, female gender, higher education, higher income, occupation (military recruits) and the interaction between gender and income, respectively. The findings highlight importance of several factors relating to tooth loss. Therefore, implementation of the community programs based on this evidence may be achieved to reduce tooth loss in the population.

SP-043

The Impact of Oral Health on Daily Performance among 10-12 Year-Old School Children in Mangalore

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Background: Primary school children represent the major focus of dental public health research and practice. It is necessary to assess the characteristics and severity of impacts of oral health in primary school children as well as to identify subgroups of children with oral health needs in terms of prevention, treatment and oral health promotion. The aim of this study was to assess the impact of oral health on daily performance among 10-12 year-old school children in Mangalore.
Methods: A cross-sectional study was conducted in primary school children of the municipal area of Mangalore, using the Child-Oral Impact on Daily

Performance (Child-OIDP) instrument and WHO Oral Health Assessment Proforma (1997) to assess the impacts of oral health on daily performance.
Results: 55.4% of children had one or more oral impacts. The overall mean impact score was 3.15 ± 4.4. The extent of impact varied from 1 to 4 performances with impacts. Impacts on eating were the most prevalent (56.8%), followed by cleaning teeth (45.1%). The impacts were mostly very little (35%) and moderate (34%). The more prevalent problems leading to impacts were tooth decay (62.7%), toothache (53%), sensitive tooth (40 .7%), bleeding gums (40.7%) and exfoliating primary teeth (34.8%). Oral conditions that related to appearance also frequently affected children.
Conclusions: The study reveals that impacts of oral health on daily performance were prevalent, but not severe. The impacts were mainly related to difficulty in eating and smiling. Toothache, oral ulcers and natural processes contributed largely to the incidence of oral impacts.

SP-044

The Measurement of Service Quality in Primary Dental Care

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In addition to the pressure form Nation Health Insurance, the healthcare sector in Taiwan is facing unparalleled challenges in an increasingly customer oriented environment. Service quality has become a watchword in dental services because of increasing competition and more demanding patients. This study aimed to explore the primary dental care quality and to identify the association between these variables. Totally 404 patients from 2 primary care clinics of a famous dental alliance were selected for interview. Dental service quality was based on the concept of SERVQUAL and modified by referring other dental service literatures.
Self-administrated questionnaire including the expectations, perceptions of primary care quality, the gap of each item was calculated by the difference between perception and expectation. According to factor analysis, dental service quality been divided into 7 domains named as professional competence, reputation of dentist, location access, tangible environment and service delivering, attitude of staffs, cost, and time convenience; satisfaction and loyalty both showed single domain. As the results, professional competence was the largest gap among these 7 domains of service quality, but reputation of dentist, location access, tangible environment and service delivering were “positive” gap showed that the perception levels were higher than the expectation levels. The literature refers to “positive” gaps as super-pleasing the customers, or delivering superior performance. It may be worth considering moving some levels of investment and effort away from the “positive” gap to those where really service quality gaps exist in order to bridge gaps.

SP-045

Prenatal and Perinatal Factors and the Risk of Oral Clefts Defects: A Population-Based Cross-Sectional Study in Taiwan

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The objective of the present study was to assess the effect of prenatal and perinatal factors on the risk of oral cleft defects (OCs). We conducted a population-based cross-sectional study of 1,138,605 Taiwanese births in 2001-2005 using information from the Birth Registry. Although the quality of prenatal care was good and free in Taiwan, small gestational age (<37 weeks), low birthweight (<2500 g), and low 5-minute Apgar score (<7) are more frequent among newborns with OCs than in Non-OCs. In multivariate logistic regression analysis adjusting for maternal age, parental education, annul average incomes, and conception of season, the risk of OCs were associated with anemia (adjusted odds ratio 2.17, 95% confidence interval: 1.39, 3.38), and diabetes (2.71. 95% CI: 1.29, 5.71), amniocentesis (2.20. 95% CI: 1.57, 3.09), induction of labor (3.64 95% CI: 2.33, 5.66), and stimulation of labor (1.44. 95% CI: 1.20, 1.74). This large population-based study suggests that prenatal and perinatal complications in the pregnant women may increase the risk of OCs.

SP-046

The Relationship between Oral Health Status and Nutrition Intake in the Elderly

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Introduction: As the health-related factors, the oral health status in the elderly has been reported to affect the nutrition intake. Besides, the health status of gingival, tooth missing and the denture status have also been reported to have a higher degree of the poor nutritional status. Attempts were made to analyze the status of nutrition intake depending on the oral health status in the elderly aged 65 years or older nutrition intake.
Methods: The correlation between the subjective problems with the mastication and the status of prosthesis in the elderly was analyzed using a logistic regression analysis. The correlation between the the status of prosthesis and the amount of nutritional intake was analyzed using a regression analysis.
Results: This showed that the elderly who had a complete or a partial denture implanted perceived a significantly higher degree of the masticatory problems

than the elderly who had a dental bridge implanted (1.67 CI 1.07, 2.59). Particularly regarding such nutrients as protein, calcium, fat and vitamin b1, the degree of nutritional intake was significantly lower ($p<0.05$).
Discussion: By examining whether such causative factors affecting the oral health as the frequency of dental visits and toothbrushing are associated with a poor oral health status in the elderly.
Conclusions: Particularly regarding such nutrients as protein, calcium, fat and vitamin b1, the degree of nutritional intake was significantly lower.

SP-047

Equity in Healthcare: Share of Out of Pocket Costs in Sri Lanka

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Introduction: Disputing the claim, "free-state health services", half of total health expenditure is estimated to be out of pocket in Sri Lanka. Hence, as a measure of equity, paper focuses on out of pocket expenditure in first contact care services in Sri Lanka.
Methods: A cross sectional study was conducted in a rural district where medical pluralism is long established. A total of 2221 patients attending 8 state-Western facilities, 4 state-Ayurveda facilities, 10 private Western facilities and 8 private-Ayurveda/traditional practitioners were identified using a probability sampling method. "Out of pocket cost" was obtained using an interviewer administered questionnaire.
Results: Total median cost incurred was highest in the private Ayurveda facility (SLR.224, range 0-1500) followed by private western (SLR. 180, range 0-1000). Patients attending both state western (SLR.22, 0-410) and Ayurveda facilities (SLR.30, 0-1090) also had to incur costs in obtaining services. The median cost for transport of the patients (SLR. 36, range 0-800) and consultation fees (SLR.130, 20-430) were highest in private Ayurveda facility. For purchase of drugs, patients in private western facility incurred highest median cost (SLR.80, range 3-800). The incidental expenses were highest at private Ayurveda (SLR.40, 12-100).
Conclusions: The findings indicate that a country where one third of the population living below the official poverty line had to incur a substantial amount on health. Seeking Ayurveda/ traditional care was more costly than western care, curtailing the ability to fallback on traditional system when necessary. This highlights the need for new buffer mechanisms to establish equity in health.

SP-048

Health Equity Vis-a-Vis Health Communication Strategies in a Decentralized Health System in India

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Objective: To assess the equity sensitiveness of health communication strategies of health programs vis-a-vis vulnerable groups in the state of Orissa, India
Methods: We reviewed the planning (identification of the communication needs of vulnerable groups), delivery (content, language and medium) and review of communication strategies of government health programs (under National Rural Health Mission) during 2008-09. We selected various disease control programs (for tuberculosis, malaria, HIV, blindness and leprosy), and reproductive and child health program.
Results: Since communication strategies are catalyst for different health programs, they cater to only those vulnerable groups or issues of vulnerable groups addressed by each health program. For example, since malaria control program has a specific focus on pregnant women and children, there are specific BCC strategies for such groups. Apart from AIDS control program, there is no information needs assessment for the vulnerable groups. Though there is use of local dialects, it is not addressing all the linguistic groups.
Conclusion: Though communication strategies are equity sensitive, they are not comprehensive enough to address all the vulnerable groups. In order to ensure health equity, communication strategies should be easy to understand, acceptable and accessible to all the vulnerable groups. Also, there needs to be community participation in identifying the information needs and review of various communication strategies vis-à-vis vulnerable groups.

SP-049

Better Understanding Better Care: A Study on the Relationship of Health Literacy and Patient Right

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Under the current environment that emphasizes patient safety, the public certainly have to be with the ability of identifying and reading health information in order to spontaneously select the decisions or behaviors that benefit health. For that reason, the health literacy of the public has to be enhanced for the improvement of the knowledge of patient right. This study aimed to explore the relationship between the level of health literacy and understanding of patient right. The relationship between the level of health literacy and understanding of patient right of the interviewed public was explored through the structured questionnaire. A total of 402 effective questionnaires were returned. The study results showed that age, education level, and the medical background of the public or publics' family were the important factors that influenced the level of health literacy or understanding of patient right of the public. After the demographic variables of the public were controlled, the results suggested a trend that the higher health literacy level the better understanding of patient right. As patient safety and patient right are being promoted all over the world, to help the public perceive and understand patient

right, the government shall value and strengthen the policies that are meant for the health literacy of the public. Moreover, the public that value patient right would monitor in the medical process in helping decrease medical mistakes, deduct medical cost and create a three-win situation for the public, hospitals and clinics, and National Health Insurance.

SP-050

Growing a Network of Mutuality: The University's Role in Global Health

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Contemporary permutations of international public health have evolved to encompass a greater understanding of the major health determinants as truly 'global' phenomena. Increasingly, there is recognition that, in the words of Martin Luther King Jr, "We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly affects all indirectly" A growth in student numbers and interest in professional development training in global health has been observed in New Zealand as it has elsewhere. Media representations and scholarly articles addressing issues of global health interest may have contributed to a greater awareness of global health. Similarly, the increase in high profile philanthropic aid to global health has played a role. A critical awareness of the impact of globalisation on inequalities in wealth and health resonate with medical, science and arts students alike. Universities are now ideally positioned to contribute to the advancement of global health, not only through advancing a global perspective on their subject, but more directly to engage in a mutually beneficial way with health systems and institutions in low and middle income countries where resources and capacity are more limited. This engagement may take the form of exchange programmes, collaborative research projects, academic supervision and advanced training to contribute to capacity to improve health outcomes. In this paper we reflect on our experiences to date and consider how academic institutions such as ours may best contribute to health improvement in low and middle income countries.

SP-051

Medical Utilization of Low-Income Families in Taiwan's National Health Insurance

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On the medical utilization of low-income families in Taiwan's National Health Insurance, in terms of the attendance rate, the number of medical treatment, hospitalization days and medical expenses. Their medical uses are then compared with those of an average insured person one by one, particularly, on five major injuries and chronic diseases such as cancer, renal dialysis, mental illness, diabetes and high blood pressure. Major results show that overall utilization rate of low-income families is 81.39% that is less than other higher income groups by 13.6%. Among various low-income groups, women use more than men; young population have the highest utilization rate, while the old population over 65 have the lowest utilization rate and keeping decreased with the age increasing. Though low-income families have less out-patient utilization, 80.79%, than other higher income groups by14.2%, their hospital utilization rate of 14.11% is much higher than other higher income groups by 8.54%. Conspicuously, their ratio of psychiatric hospitalization are 39.24% higher than other higher income groups level. Patient choices among different hospital levels are also quite different. Nearly half of the low-income families select regional hospitals for inpatient care. The prevalence rate of suffering from major injuries for low-income people is 3.08 times of the other higher income groups, while the rate of chronic diseases is about 1.1 times. The over all finding show that low- income families have high medical need but sill lack of access to realize necessary medical treatments.

SP-052

Socioeconomic Status in Overweight: A Study Based on the Survey of Social Development Trends in Health Security in Taiwan

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Objective: With diet habit change and lifestyle drift towards stationary state, the body mass index of people is increasing. The studies in Western society showed that people with low socioeconomic status have higher body mass index than higher one. It is worth to investigate the association between socioeconomic status and overweight in Taiwan.
Material: Data for this study comes from the Survey of Social Development Trend about Health Security, a representative survey in Taiwan. We used data from subsample of all respondents who were aged 26-65 years old. The main outcome measure was the respondents' self reported height and weight that was calculated and defined as overweight according to the age/sex specified body mass index criteria given by the Department of Health. All statistical analyses were performed with SAS software. We used logistic regression to compute odds ratios and confidence intervals to examine the association between socioeconomic status and overweight.
Results: The research results found hat 23.3% of people are overweight, and 12.4% of people are obese. After controlling other factors, logistic regression showed that people with elementary education have 1.24 times more likely to be overweight compared to people with

graduate certification (95%CI 1.04-1.47). People with higher yearly income compared to those who with yearly income low than 20 thousands NT dollars have less risk to be overweight (OR=0.80). We also found that sex, martial status and age are significant associated with overweight.

SP-053

Out of Pocket Payment and Its Financial Burden on Households

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Introduction: In Mongolia policy measures are needed to reduce OPPs. In order to effect significant change, policy-makers must consider what types of OPPs are currently being made and ways that they might be offset. In a review of relevant literature, very little research was found to have been conducted on household OPPs in Mongolia. Objective: To assess the effect(s) of OPPs on health care utilization, to measure the burden of OPPs on households, and to examine socio-economic factors of health care expenditures of households in Mongolia. Research methodology: Data were collected from inpatients at district and provincial hospitals. The interviewers collected information on household demographic and economic characteristics; health insurance coverage; utilization of preventive, and curative health care services; out-of-pocket costs related to health care, etc.
Result: Overall, families spent an average 90USD on OPPs during a hospitalization. A relatively large percentage of families were found to have such high OPP expenditures. Extremely poor families spent 22 percent of monthly income on health-related expenditures. Poor households were found to have spent 16 percent. Average families spent 7.1 percent on OPPs for health-related needs, while middle-class families spent 5.7 percent and wealthy families spent only 5.2 percent of their monthly incomes on health-related OPPs during a hospitalization. Conclusion: Extremely poor and poor households spend disproportionately larger shares of their incomes for health-related OPPs than other socio-economic groups. Current health insurance arrangements in Mongolia are insufficient for alleviating this financial burden on extremely poor and poor families.

SP-054

The Associations between Academic Aspiration, Socio-Economic Status and Depressive Symptoms among Junior High School Students in Okinawa, Japan

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Objective: The purpose of this study was to investigate the associations between academic aspiration, socio-economic status and depressive symptoms among junior high school students. Methods: The study sample consisted of 3714 students aged 13-15 of all 17 public junior high schools in Naha city, Okinawa, Japan. We conducted self-administered questionnaires in December 2007. The survey included questions about academic aspiration (less than university, university and more), socio-economic status (well-off, average, poor), and depressive symptoms. The socio-economic status was assessed by perceived family wealth. Depressive symptoms were measured by using the Center for Epidemiologic Studies Depression Scale (CES-D). The data were analyzed using contingency tables and logistic regression models.
Results: Girls had higher levels of depressive symptoms than boys. Socio-economic status was strongly related to depressive symptoms in both boys and girls. Students feeling poor had higher levels of depressive symptoms than those feeling well-off. Academic aspiration was related to depressive symptoms in boys but not in girls. Boys who reported low academic aspiration had higher levels of depressive symptoms than those who reported high academic aspiration.
Conclusions: These findings show that socio-economic status was related to depressive symptoms among junior high school students in Okinawa. On the other hand, the gender difference in the relationship between academic aspiration and depressive symptoms should be considered.

SP-055

When Justitia Meets Hippocrates: Coordination of Medicine and Law in Methadone Maintenance Program

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Background: Center for Disease Control (Taiwan) has carried out Methadone Maintenance Program (MMP) and the treatment for HIV/AIDS infected cases was free. But lots of cases were dropped out because of legal issues. Ministry of Justice (MOJ) started deferred prosecution for IDUs to promote participation of treatment instead of punishment since September, 2007. We evaluated the patients' participative duration of treatment to know the effects of price and law.
Materials: For demographic collection and analysis, we collected data from management information system of the Kunming Branch of Taipei City Hospital between November (2006) and November (2008). 1330 person-times (1236 persons) were analyzed.
Results: There were 1160 male and 170 female person-times, with a mean age of 41 (17-87). HIV, HBsAg and HCV positive rates were 13.5%, 18.5% and 86.7% respectively. 1054 person-times afforded all medical service fees by themselves. 185 person-times were treated free because of HIV infection. 91

person-times were deferred prosecution who needn't afford medical expenses but MOJ pin them down to Drug Prevention and Control Act. Mean days of three groups as mentioned above participative duration were 185, 203 and 272 days respectively. Survival analysis showed deferred prosecution cases who stay in MMP were longer than other cases significantly (Log-Rank test, $x2=28.20$,$p<0.001$).
Conclusions: Some studies have indicated the longer patients stay in treatment, the better effects for patients will be. The coordination of law and medicine result in a positive outcome for MMP.

SP-056

"Risk Sexual Behaviour and Knowledge about HIV/AIDS among Male Injectable Drug Users in A Selected District town" of Bangladesh

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It was a descriptive cross sectional study conducted among 100 patients of five drug addicts' treatment centre and rehabilitation center in Mymensingh town during the period of March to June 2007. The objectives of the study was to explore possible factors related to risk sexual behavior and knowledge about HIV/AIDS among the male injectable Drug Users(IDUs). IDUs were interviewed with a view to identify their various socio-demographic characterites as well as types, routes, frequencies and times of syringe used during administration of injectable drugs. Respondents were selected by purposive convenient sampling technique. The ages of the respondents were 15 years and above who were interviewed with a structured and semi structured questionnaire. Among 100 respondents, all were male with an average age of 26.56 years with a standard deviation of ± 3.70 years. The respondents were mostly (64%) unmarried. A total of 40% respondents had completed higher secondary level of education and 36 % were graduate and above. Thirty four percent respondents were unemployed. Most respondents belonged to middle class families with an average monthly income of 10290.00 taka with a standard deviation of ± 4722.00 taka. A total of 27% of the respondents started to take drugs mainly due to frustration and 23% as a result of unemployment. Besides this, addiction due to peer pressure also quite high (19.0%). Seventy six percentage of the respondents were found to take drugs for the period of 5 years or more and average period of drug use was found to be 5.52 yrs. Out of 100 respondents 76 were addicted with cannabis and 70 respondents were addicted with Buprenorphine(Tidijesic) and 50 respondents were addicted with pathedin. Thirty two percent respondents were found to take injectable drugs for the period of 5 yrs or more . A total of 98% respondents had experience to take multiple drugs. Forty percent respondents did not use disposable syringe during taking drugs.
It is evident that 80% respondents had the pre or extra-marital history of penetrative sexual exposure. Only 17.1% used condom during penetrative sex with their partner in the preceding month. Among the respondents having history of pre or extra marital sex 80% had to pay money to CSWs in the last month. A total of 41% respondents had average knowledge on HIV/AIDS regarding its cause, transmission and prevention. There was significant relationship between pre or extra marital sex and education level of the respondents. A total of 52.6% of the respondents who were graduate and above had good knowledge on HIV/AIDS.

SP-057

Characteristics of Patients Diagnosed with HIV/AIDS in University Malaya Medical Centre from 1986-2008

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Objective: This study aims at describing the characteristic patient diagnosed with HIV/AIDS seen in the University of Malaya Medical Centre (UMMC) from 1986 to 2008.
Methods: This is a retrospective study. Data were analysed using SPSS.
Result: A total of 1782 patients were collected (531 HIV and 1253 AIDS). The mean age of HIV patient was 38.3 years, 42.9% belonged to the 30-39 year age group and for AIDS patient was 43 years and 37.2% belonged to the 40-49 years age group. The majority were male, Chinese, had 9-11 years of education, employed and probably contracted HIV through heterosexual intercourse. The mean baseline CD4 count was 362 (95% CI: 332 – 393) for patients presenting with HIV and 153 (95% CI: 137 – 169) for patients presenting with AIDS. The mean plasma HIV viral load was 89,826 (95% CI: 60,369 – 119,283) for HIV patients and 248,611 (95% CI: 195,282 – 301,940) for AIDS patients. The distribution of patients at the WHO clinical stages were 1446 (81.2%) in stage III and IV. A total of 843 (47.3%) patients received anti-retroviral treatment, 720 (40.4%) with HAART and 123 (6.9%) without HAART.
Conclusion: The mean age of patients presenting with HIV was lower than patients presenting with AIDS. As expected, the mean CD4 count of HIV patients was higher than AIDS patients and the plasma HIV viral load of HIV patients was lower than AIDS patients.

SP-058

Knowledge on and Risk Perception of HIV/AIDS among University Students in Bangladesh

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Background: Although University students are at risk to HIV/AIDS due to their recent pubertal changes, poor self-control, poor life skills, availability and accessibility to sex workers and risky sexual behavior, much is unknown about the knowledge on and perception of HIV/AIDS among youths including students. Thus, this study attempted to observe the level of knowledge on, perception of as well as the factors associated with risk perception of HIV/AIDS among the young university students in Dhaka city.
Methodology: A structured questionnaire with few open ended questions along with many closed ended questions used to collect data from 500 students from one public and two private universities.
Results: Overall knowledge on HIV/AIDS among University students was satisfactory (mean =16.36 out of 23). But, knowledge on prevention, treatment and symptoms was to some extent low. In general, mass media (television was most frequent) was the most dominant source of students' knowledge on HIV/AIDS com pared to parents and teachers. The perception of the own risk of being infected was comparatively lower than the perception of their friends' risk of being infected, no treatment and AIDS is the most dangerous disease in the history. Relatives as students' knowledge source was significant predictor in the perception of their own risk while doctors as knowledge source was the significant predictors of the perception of their friend were being infected. Significant predictors of perception of AIDS as the most dangerous disease were radio

SP-059

People with HIV / AIDS as Role Model in HIV and AIDS in the City of Makassar

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In HIV and Aids needed the participation of all elements in society, including ODHA (People With HIV / AIDS), because information and experience from ODHA can be used as the learning process for others to prevent and cope with HIV and Aids. HIV / AIDS is one of the health problems that are now received the attention of people of the world, HIV is the virus that causes AIDS because of a decrease in damage even sisten resistance body, while AIDS is a set of symptoms a disease caused by decreasing the body's immune system anyone. ODHA (People With HIV / AIDS) is the person who found the body of the HIV-positive. HIV and AIDS in Indonesia, including in the case have been conducted since AIDS was first discovered in Indonesia in 1987 and in Makassar in 1996, so that ODHA role in the prevention and HIV and Aids can be a role model in the activities of prevention and treatment HIV and Aids in the community. Research in this thesis aims to find out how ODHA role in the prevention and HIV and Aids, so ODHA can serve as role models for the prevention and treatment in HIV / AIDS. ODHA akan into the sample or informants in this research is that ODHA has received empowerment and assistance from NGOs (NGOs) and ODHA that have not been used or not as a benchmark so that it can be the difference, and other issues of perceived day-to-day as part of the family and community, as well as what can be made so that ODHA can serve as role models in the prevention and HIV / AIDS. In implementing the activities and the prevention of HIV / Aids for this almost all elements of society have participated, the government and community organizations have also been working together so that the problems of HIV / Aids can be overcome. ODHA as part of the problem of HIV / Aids that we are facing can be used as examples of concrete activities in the prevention and HIV / Aids because they feel themselves living with HIV positive, so that experiences can be distributed to the community as a learning and self-control to prevent and cope HIV / AIDS in this community.

SP-060

Potential Involvement of Buddhist Monks as Advocators for HIV/AIDS Prevention in Sri Lanka

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Objective: In Sri Lanka, Buddhist monks play an important role in people's daily life as a community leader. To explore monks' role as advocator for HIV/AIDS prevention in Sri Lanka, we conduced a survey regarding knowledge, attitude, and practice (KAP) on HIV/AIDS.
Methodology: The survey was carried out in Buddhist schools and a university in central Sri Lanka from May to July 2009. Among those who were 15 years or above, 259 monks agreed to participate in the study (response rate=84.9%). After obtaining informed consent, they filled in the anonymous questionnaire including KAP on HIV/AIDS and socio-demographic information.
Results: Respondents hold about 1-hour religious meeting twice a week, and 44.8% usually meet 100 or more community people each session. Nearly a half of them (52.9%) have ever talked about behavioral issues in the meeting. They thought they were more appropriate to offer HIV/AIDS awareness programs in the community than NGO (45.9% vs. 35.1%), and 71.8% were confident to support HIV/AIDS patients as well as preventive activities. However, their knowledge on HIV/AIDS was limited and only few (2-7%) have ever covered HIV/AIDS related topics in the meeting. More than three

quarters (76.8%) would like to learn more about HIV/AIDS.
Conclusion: If more knowledge on HIV/AIDS is given to Buddhist monks through a systematical training or awareness program, they would become potential advocators of HIV/AIDS prevention in the community.

SP-061

Knowledge About HIV Infection and Attitude towards People Living with HIV/AIDS among the Nurses Working in Bpkihs

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Knowledge about HIV Infection and Attitude towards People Living with HIV/AIDS among the Nurses Working in BPKIHS Mehta RS*1, Karki P*2, Rijal S*3 B. P. Koirala Institute of Health Sciences, Nepal Abstract: In world More than 40 million people are living with HIV/AIDS, 2.3 million are under 15 yrs , 14000 new infections each day , 1.7 million human infected with HIV/AIDS, 3.1 million deaths from AIDS , Million new HIV cases (13425) per day1. The main objective of this study was to find out the knowledge about HIV infection and explore the attitude of nurses towards the PLWHA working in BPKIHS. It was descriptive cross sectional study conducted among the nurses working in medical-surgical and pediatric nursing department of BPKIHS. Using stratified random sampling technique units or wards were selected and using population proportionate method 60 nurses were selected out of 240 nurses to collect the data using pre-tested questionnaire in the first week of October 2007 and collected data was analyzed using SPSS-11.5 software package. It was found that 60% nurses were between age group of 20-25 years, Hindu (91.7%), staff nurses (78.3%), and non of them taken HIV/AIDS training previously. Nurses had more knowledge on causes (86.7%), transmission, symptoms, applying universal precaution (98.3%), where as less knowledge on confirmation of diagnosis(45%), ART (36.7%), PEP (45 %), and HIV/AIDS related services available at BPKIHS i.e. VCT (8.3%), PMTCT (13.3%),

SP-063

Perception of HIV/AIDS-Related Stigmatization and Discrimination towards People Living with, or Affected by, HIV/AIDS: Focus Group Perspective from a Multi-Ethnic and Multi-Religion Malaysian Society

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Background: Globally, HIV/AIDS-related stigma and discriminatory attitudes deter the effectiveness of HIV prevention and care program. This study aimed to understanding the root of HIV/AIDS-related stigma and discrimination among Malaysian public.
Methods: Using a purposive sampling method, a total 14 focus group discussions (n=74) was carried out between March and July 2008.
Results: Perceived HIV/AIDS-related self-stigma and discrimination towards people living with HIV/AIDS (PLWHA) was profound. In particular, participants' responses indicated that the uneasiness towards PLWHA takes two forms. The first is the extreme fear of the lethal nature and deleterious effects of HIV infection, and second involves fear of contagion. It appears that discrimination attitudes toward PLWHA occur at different levels and to varying degrees across various ethnicities. Key factors affecting discriminatory attitudes include high-risk taking behaviors, individuals related to stigmatized identities, source of HIV infection, stage of the disease, and relationship with the infected person. Participants from rural locality have a relatively narrow view of PLWHA than those from the urban society indicated that stigmatization and discrimination faced by those living with HIV were intensified in a rural setting.
Conclusion: Current HIV campaign that emphasizes on educating public the routes of HIV transmission, risky behaviors raise HIV risk, and high risk groups susceptible to acquisition of HIV should integrate prevention of HIV/AIDS-related stigma and discriminatory attitudes towards PLWHA.

SP-064

Potential Risk Factors for Cryptosporidium Infection

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Background: Cryptosporidiosis is very common in patients with HIV/AIDS and remains a threat to public health. A crosssectional analytical study to determine the prevalence and identify potential risk factors associated with Cryptosporidium infection among HIV/AIDS patients was conducted.
Methods: In the study of 143 HIV/AIDS adult patients with diarrhea, a total of 23 cases with Cryptosporidium infection and 120 cases with Cryptosporidium negative were reported during the study period.
Results: Results revealed that the prevalence of cryptosporidiosis was 16.1%. In a stratified analysis controlling for gender, factors associated with Cryptosporidium infection were history of diarrhea >21 days, CDþ 4 count ≤50 cells/mm3, and WBC count <4,000 cells/mm3.
Conclusion: These findings confirmed that there was a strong association between cryptosporidiosis and CDþ 4 count. Such information may provide possible

recommended strategies for preventing cryptosporidiosis in HIV/AIDS persons.

SP-065

Kap Study Regarding Universal Precaution Practices towards HIV/AIDS among Medical Students in District Quetta, Pakistan

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This KAP study was to assess the current level of Knowledge, Attitude and Universal Precaution Practices among 3rd, 4th and 5th year M.B.B.S. students of Bolan Medical College Quetta-Pakistan of the year 2007 towards HIV/AIDS. Two hundred and twelve medical students from year 3rd to 5th were invited to fill out a self-administered questionnaire. A total of 200 medical students consented to participate in this study, giving a response rate of 94%. Among them 35% had good universal precaution practices, 49% had moderate and 16% had poor universal precaution practices towards HIV/AIDS. Practices regarding universal precaution practices among medical students mostly at moderate level but some students had risky behavior, such as recap, bent or broke needles by hand after used to patients and disposed sharp instruments with other clinical waste. Moreover, the knowledge and attitude level of the medical students were found moderate towards HIV/AIDS and universal precaution practices. Statistical analysis indicated that there was significant association between knowledge and universal precaution practices (p=0.003) and attitude and universal precaution practices (p=0.033). Medical students still had limited knowledge about mode of transmission of HIV because of lack of understanding, and had no experience on it. Knowledge on HIV/AIDS and universal precaution should be enhance and implement in the medical college core curriculum, it should give emphasis on misconception, lack of understanding and supporting and promoting the students to adapt positive attitude towards universal precaution practic

SP-066

The Barrier Factors and Promotion Factors of Disclosing Medical Errors and Their Effects on Doctor's Willingness to Disclose and Apologize for Medical Errors

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In Taiwan, for the cost and impact of adverse events and medical errors, efforts focused on preventing in advance. However, some countries introduce "disclosure" to solve the problems. This research is to explore the barriers and the promotion factors of doctor's disclosing medical error in Taiwan. In addition, we want to know what kind of factors will affect disclosure and apology. We provide 510 the questionnaires in six hospitals. The response rate is 82.9%. "Concerning to be sued" is the major barrier factor. "When patient is reasonable to communicate" is the major promotion factor. From logistic test, "Concerning of professional reputation", "Severity of medical error", "Patient with higher social-economical status", "Patient with higher education background", "Doctor knowing patient or his/her family well", "Patient and his/her family are reasonable to communication" and "Patient and his/her family realizing patient's condition very well" are the common factors to affect disclosure and apology for minor medical errors. In addition to above factors, "Concerning to be sued", "Concerning impact on doctor-patient relationship", "Concerning patient having unreasonable response", "Patient with serious condition" and "Old aged patient" are the common factors to affect the disclosure and apology for serious medical error. This research suggests that an open discussion working environment may encourage doctors face medical error more positively.

SP-067

The Acceptance of Heart Model to Overcome Children Under Five Malnourish in Selayar, South Sulawesi, Indonesia

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Rationale Positive deviance: feeding practice, hygiene practice, and health seeking behavior from children who have normal nutritional status, can be developed and introduced as Heart model to overcome children malnutrition. Introduction of the model are needed for community in Selayar which is the risk area of children malnutrition.
Objective: To get information of the mothers acceptance toward positive deviance through Heart model, and their effect on nutrient intake and growth of child under five years
Method: A Quasi-Experiment research was conducted in different group of nutritional status of children. Subjects were 35 children under five who undernourished (-2SD W/H) as an intervention group, and 56 children under five who have normal nutritional status as control. The Intervention group was programmed in hearth model with using 4 heart points, in three months. The Research variables are included: the acceptance of mother toward positive deviance, nutrient intake, nutritional status, and growth status of children under five.
Result: The result of this study shown that the acceptance of mother for feeding practice about 48 %, Hygiene practice (22.9%), and Health seeking behavior (51.4%). Nutrient intake were also increase before and after intervention (P0.05). Growth velocity for group intervention got 28.6%.
Conclusion: The acceptance of mother toward positive deviance through Hearth model will effect on nutrient intake and growth status of child under five years.

SP-068

Help Seeking Behaviour of Indigenous Taiwanese with Drinking Problems

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Alcohol continuously imposes serious threat to the already poor health of Indigenous Taiwanese. Despite the high prevalence rates of alcoholism, few Indigenous Taiwanese suffering from alcoholism seek help. This study investigated the pattern of help seeking and possible existing barriers in problems drinkers. It was a community-based study; participants were selected from 3 indigenous communities (Amis, Truku, and Bunun) of Haulien County. Their drinking problems, general functioning and barriers to help seeking were assessed. A total of 164 problem drinkers were identified. They were further classified into 3 groups, namely non-help-seeker (NS) (68%), help-seeker-non-professional (SNP) (23%) and help-seeker-professional (SP) (9%) according to their help seeking behaviour. The results of preliminary analyses show that those of more than 50 years old and women were more likely to seek help. Ethnicity was not associated with help-seeking. A strong relationship between seeking help for drinking and the number of life areas affected by alcohol consumption (including physical and mental health, home life, social life, work or employment opportunities, financial position). Further analyses suggested that physical and mental health was significantly associated with elder problem drinkers, while home life and social life were associated with female problem drinkers. Barriers to help seeking were categorised as either person-related or treatment-related. Participants indicated that person-related barriers were the main factors influencing their decision to seek treatment for a drinking problem. Furthermore, stigmatisation of people with alcoholism also interfered with help-seeking.

SP-069

Health Outcomes Post Earthquake for Rural Ethnic Minorities in Jin Shia Jiang Area, China

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Introduction: Few published studies are available to understand health outcomes in areas with high proportions of ethnic minority after natural disaster in China. By conducting a field based survey in Jin Shia Jiang area, six months after the Yunnan/Sichuan Panzhihua earthquake in Aug 2008, this study aims to: i) examine general health status and public health issues post earthquake in remote rural area, ii) identify health knowledge, attitude and practices of rural ethnic minority group and iii) discuss implication on relevant public health interventions and emergency preparedness in rural settings for indigenous population.
Methodology: A cross-sectional, face-to-face household survey was conducted in March 2009 using a cluster, snowball sampling method in the Maan Village of Xinan Township, Liangshan, Sichuan. Demographic information, earthquake related patterns, self-reported health status, injury and disease patterns, nutritional issues, living environmental health risk and knowledge/attitude/practices of health related behavior were collected. Data analysis included Fisher's exact test and Pearson's Chi-square analysis by trends.
Results: Whilst earthquake related mortality is low, results indicate earthquake related structural damaged affected 92% of the households. Preventable infectious diseases were common within 6 months post disaster period. Injury prevalence was higher when compared with 2006 census data. Predictors and gaps in health knowledge, attitude and practice were also identified.
Conclusion: Potential health education interventions should be developed to improve rural indigenous population health outcomes and practices.

SP-070

Study of Knowledge, Attitudes and Relative Factors of Tuberculosis Prevention among Students of Junior High School in Indigenous Living Areas in Hualien

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Objectives: The incidence of tuberculosis (TB) higher than teenage in Hualien is the highest in Taiwan. The porpose of this study was to survey the knowledge and attitude of TB prevention among students in junior high schools located in indigenous living areas in Hualien.
Methods: We performed cross-sectional survery on the junior high school students in three indigenous villages namely, Xiu-ling Village, Wan-rong Village and Zhuo-xi Village where the TB incidences are the highest among Hualien area. A structure questionnaire was used for data collection. In all, 606 questionnaires were distributed and 491 returned a response rate as 81.01%. We excluded uncomplete data and then 468 questionnaires were used for data analysis.
Results: The main source of information about TB was television, teachers and clinic nurse. Sixty percent reported that he or she did not obtain sufficient information for TB. The average correct rate for TB knowledge test was 24.29%. The questions that showed the highest correct answer was the method to diagnose TB and the lowest were the method of TB treatment plan and TB vaccination. The variables of relative factors of TB knowledge were the public source of TB information, the TB information from at least three sources, the availability of TB information, the TB information obtained from a clinic nurse, and TB slogan. Regarding the attitudes about TB, 79.1% of students reported that they worried about getting TB, 74.6% agreed that TB is a serious disease, and only 37.8% felt they have chance to

getting TB. Regarding TB stigma, subjects tends to be afraid of the condition if others know they were infected with TB, to feel embarrassed if they getting TB, to feel ashamed if getting TB. The most common cause of getting TB is poor hygiene. The variables of relative factors of TB stigma were the school they studied and the villages the lived. The students who ever got TB would felt easy to get TB. The relative factors of preventive TB behavior intention were TB knowledge, health behavior and the incentive to obtain more TB information.
Conclusion: These results can be used for TB prevention in junior high school in indigenous living areas. We suggest to give more TB education to these students and it is a part of effectve ways on decreasing TB in ten years of our government policy. The material of TB education needs to be improved and made more interesting for students. If students receive correct TB information, they will propagate these information to their family and community.

SP-071

Urbanization, Violence & Health: Secondary Trauma and Chronic Stress among Urban Low Income Communities- All for New Public Health

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Interpersonal violence (family, intimate partner and community violence) is increasingly recognized to impact on public health in rapidly developing countries. Such violence emerging in urban poor/low income communities amidst rising prosperity in Malaysia is posing serious challenges to public health policy. Qualitative in-depth interviews were conducted with 25 respondents from 12 low-cost housing within Kuala Lumpur to explore their perceptions, attitudes and experiences of violence, and health impact. The 25 respondents, (12 men and 13 women) of diverse ethnicity, were staying in predominantly public low-cost, high density housing. Community violence, i.e. vandalism, street fights, robbery, drug dealing and homicide, was common. Women and men perceived domestic violence as private matter although several felt it was not right for a husband to beat his wife. Several men had been robbed, threatened and beaten. Three men had perpetrated violence: selling drugs during teen years, involved in illegal motorcycle racing, and assaulting a neighbour. Two women had been robbed. However, majority reported at least one family member having had experienced some form of violence. None had suffered any physical disability/disfigurement due to violence. However, secondary traumatisation, viz. hearing about rape and murder happening within the neighbourhood, had created pervasive fear of and vulnerability to violence. None reported symptoms of severe psychological consequences viz. disturbed sleep, appetite and moods. Rapid urbanization and poverty leading to community violence impact on people's health through secondary traumatisation and chronic stress. New Public Health, based on citizen empowerment, is urgently needed to address such ecological correlates of health.

SP-072

Burden of Home Injuries to the Surgical Unit in the General Hospital, Nuwara-Eliya, Sri Lanka

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Introduction: Injuries accounts for 9% of world deaths and 12% of the world burden of diseases. In Sri Lanka, injuries were the leading cause of hospital admissions for the past decade. Published data on the burden of home injuries in Sri Lanka are scarce.
Objective: To describe the burden of home injuries to the Surgical Unit in the General Hospital, Nuwara-Eliya, Sri Lanka.
Methods: A descriptive study was carried out in the Surgical Unit (male and female) from May 1, 2008 to June 30, 2008 (period of two months). All subjects admitted during this period with home injuries were included in the study. Data were collected using an interviewer administered structured questionnaire. Data was entered into an Excel data sheet and was analyzed using SPSS 12.1 statistical software. Results Of the admissions with unintentional injuries, home injuries constituted 20.9% (n=68). The mean age of the injured was 14.5 years (SD = 18.1 yrs). Majority were females (60.3%). Of the home injuries 35 (51.5%) were due to falls, 15 (22%) were due to instruments, 11 (16.2%) were due to burns, 2 (2.9%) from foreign bodies in the nose and 5 (7.4%) due to other causes. Out of 11 burn patients 6 were due to hot water burns under the age of 2.5 years.
Conclusions: Burns in young children were identified as an important cause of home injuries apart from falls and instruments in this cold climate.

SP-073

Contribution of Alcohol to Deaths in Road Traffic Injuries in Eastern Taiwan

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Background and purposes: Road traffic fatality has been consistently highest in eastern Taiwan. Previous studies revealed risky driving behavior is common in this district. Our objective was to assess whether alcohol involvement in crashes and their fatality.
Materials and Methods: Police records of motor vehicle crashes occurred in eastern Taiwan, from January 2001 to December 2005 were analyzed. Information on all traffic injuries is assembled by road police. Detail information was collected on the crash and the vehicles,

drivers and persons involved. This report was based on 9,611 crashes caused by drivers' fault.
Results: On average, the fatality rate was 5.2%. Two major causes of fatal crashes were driving under the influence of alcohol (DUI) 38.2% and speeding 17.7%. In rural districts, of the 5,748 crashes, the average fatality rate was 7.7% and the primary causes were DUI (15.3%) and speeding (9.0%). Of the 444 fatal crashes, speeding (14.7%) and DUI (35.1%) accounted for nearly half of them. In urban districts, of 3,863 crashes, the average fatality rate was 1.3%. Also speeding (3.3%) and DUI (6.2%) were the primary causes of the crashes. Of those crashes, the average fatality rate was about 3% to 6%. Multivariate analysis showed DUI and speeding were the significant factors associated with fatality in rural district.
Conclusions: Driving under alcohol influence was really common in eastern Taiwan, especially at rural district. This issue should be tackle without delay. The characteristics of road-users and the efficiency of trauma rescue system should be further assessed. Campaigns of road safety and public transport education are in needed.

SP-074

The Roles and Experience of Bystanders in the Bullying Process

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Background: The responses of bystanders can enhance or reduce the effects of bullying. Besides adolescents, adults could also be bystanders. This study intended to understand the bullying process via bystanders' observation and the possible factors of the bystanders' various responses.
Method: Ten focus groups (five for boys and five for girls) were conducted to collect adolescents' attitude and responses about bullying. Each group consisted of six junior high school students. Five teachers and five parents were interviewed to understand their experiences about youth bullying. Content analysis and ground theory were used to analyze the results. All participants have signed the informed consents.
Results: According to students' observation, girls conducted verbal and indirect bullying more frequently than boys. The victim was probably bullied by different ways consecutively, such as starting from verbally abused, followed by social isolated and physical bullied in the end. Some distinct roles of adolescent bystanders can be identified as reinforcers, defenders, and outsiders. Factors accounting for becoming bystanders may include victim characteristics, class atmosphere, teacher's attitude, and bystander's personality. Most of the teachers reacted to bully passively, which means not until something happened did they deal with it. Unlike verbal bullying or social isolation, physical bullying always caught teachers' attention. Parents usually did not realize the serious part of youth bullying unless their child was the target.
Conclusion: Most students, teachers and parents are aware of or even involved in the bullying process. Future interventions should emphasize on persuading bystanders to prevent or stop bullying.

SP-075

Epidemiology of Hospitalized Burns Patients in Taiwan, 2007

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Although burn injuries are not the leading causes of injury-related deaths in Taiwan, patients need a lot of time and medical services to treatment or recovery after burning. This research brought "inpatient expenditures by admissions (DD)" and "registry for contracted medical facilities (HOSB)" form national health insurance research database in 2007 into analysis by using SPSS 14.0 software. There was 7,126 inpatient cases caused by burn injuries (males 61.23%, females 38.77%), and the average medical expenditures in each admission was 107,448 NT dollars in Taiwan, 2007. The total inpatient rate was 31.04 per 100,000, and males were higher than females (males 37.58 per 100,000, females 31.04 per 100,000). The inpatient rate of child form 0 through 4 years old was higher than any others. Among hospitalized burns patients, 53.79% (3,833 people) were consulted at plastic surgical department, 41.36% (2,947 people) were hospitalized in the medicine center. Each person complicated with 2.5 other diseases or injuries and received 1.51 surgeries or operations in the average. The hospital mortality caused by burn injuries was 138 people. The factors associated with hospital mortality caused by burn injuries were 1) ages, 2) sites of burn injuries, 3) inhalation injury, 4) degrees of burn injuries, 5) intentional burn, 6) hospitalized in the medicine center, 7) the number of other diseases or injuries, and 8) the number of operations by using logistic regression analysis.

SP-076

Injury Mortality Trends by Sex, Age and Cause in Taiwan

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Injury, threatening human lives and wealth, is the principal public health problem in Taiwan. The situation caused by injury in adolescent, youth, and middle-aged groups is especially remarkable. By long-term trend analysis of injury mortality rate, we may evaluate past injury prevention strategies and anticipate proper ones for the future. The research used the 1986-2007 Vital Statistics of Department of Health, Executive Yuan,

ROC, to calculate kinds of injury mortality rate by age, gender and cause. A 22-year trend of injury mortality rate was pictured then. The results and conclusions are as followed: In general, both of the counts of injury death and the injury mortality rate of male are higher than female in Taiwan. Injuries can be unintentional or intentional. The unintentional injury mortality rate decreased, but intentional one increased. Motor vehicle injury was the leading cause of injury death in Taiwan, followed by drowning. These two injury mortality rates decreased. Fall injury was ranked the third cause of death and has taken the place of drowning since 1996. The rate of fall mortality has remained stable. Suicide mortality rate significantly increased in study period, yet homicide mortality rate slightly decreased. While there is a downward trend in unintentional injury deaths, more effective measures to prevent motor vehicle injury, drowning and fall injury should be developed and fully implemented. On the other hand, to reduce suicide and homicide injury deaths should be most concerned in the future.

SP-077

An Epidemiologic Analysis of Suicide in Taiwan: 1986-2006

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In Taiwan, suicide has become a serious problem, ranking among the top ten leading cause of death since 1997. Therefore, it is necessary to understand the high-risk groups and methods of suicide for making prevention strategies. Data were obtained from the Death Certification dada file provided by the Department of Health from 1986 to 2006. The aim of this study was to examine the age, sex, methods, and long-term trends in suicide mortality. The results shown: (1) There were 49,269 deaths, and 66.9% of them were males. The 30-34 year-old was dominant age group and accounted for 9.8% (4832 deaths). However, the highest mortality rate among the 80-84 year-old group (44.24 per 100,000). Hanging (40.9%) and poisoning with solids/liquids (29.9%) were two common methods of suicide. (2) Total suicide mortality rate declined from 1986 to 1994, but increased from 1994 to 2006. The suicide rate of male is higher than female, and both increased since 1994. (3) Divided into three age groups (0-19, 20-64, and 65 above), the mortality rate of 20-64 year-old has been increased dramatically since 2000. (4) Except for poisoning with solids/liquids and firearms, all kinds of suicide mortality rates increased. As all results shown, the suicide rate has been rising since 1994. Therefore, in addition to economic environment and social welfare policies, the government has to promote health education and suicide prevention programs for high-risk groups.

SP-078

The Preliminary Study of Disability Certification for Patient with Traumatic Brain Injury by Using WHO ICF System

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Traumatic brain injury (TBI) is an important public health problem which can result in death and permanent disabilities. Taiwan will start to use the International Classification of Functions, Disability and Health (ICF) for disability classification in 2012. The aim of this preliminary study is to try out ICF on TBI patients who have disability certificate. This study recruited 30 TBI patients with mean age of 47.4 ± 18.7. The ratio of male to female is 9:1. There are 8 minor, 6 moderate, 12 severe and 4 critical disabled patients according to their certificates. At the time of injury occurrence, 27 patients had initial loss of consciousness, 28 intracranial hemorrhage, 14 amnesia, 22 neurological deficients and 6 co-morbidities. According to ICF core set, patients were evaluated separately for Body Function, Activities and Participation, and Environmental Factors. The result shows that 41 items may be relevant because more than 30% of patients had coded with these items. Relating ICF scores with TBI variables, it was found that disability classification and Body Function total score are statistically associated; Activities and Participation total score is significantly related to both disability classification and Glasgow Coma Score; convulsion, amnesia and neurological deficients are significantly associated with the Environmental Factors total score. In this study, we find ICF system and disability classification are positively related. Thus we can use the result of this study as a future reference for ICF core set for TBI patients in Taiwan.

SP-079

Factors Affecting the Outcome of Head Injury and Differences between Fall and Traffic Induced Head Injury

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Head injury is a major trauma to cause morbidity and mortality. Traffic accident and fall are two main mechanism to cause head injury. We evaluate factors affecting the outcome of head injury and differences between two major causes of head injury in a community based hospital. From 2006 to 2007, all victims admitted to intensive care unit in a community hospital under the diagnosis of head injury were collected. Among 325 cases evaluated, there were 138 cases of fall (42.5%) and 172 cases of traffic accident (52.9%), 72.9% were male, 24.6% were associated with alcohol consumption, and 37.3% received an operation. Outcome of head injury

was significantly related to age, mechanism of injury, combined spinal injury, associated complications, initial Glasgow Coma Scale (GCS) and TISS. Fall associated with higher percentage of ICH (60.4%) and more complications (57.7%) than traffic accident patients. Fall caused head injury is associated with older age (OR=8.69, 95% CI=3.08-24.57), alcohol consumption (OR=0.44, 95% CI=0.26-0.72) and poorer prognosis (OR=3.77, 95% CI=1.98-7.16) after controlling for clinical confounders. We demonstrate that fall account for almost half of the head injury in a community hospital. Prevention for fall and education to reduce alcohol consumption especially for older residents are crucial to reduce morbidity and mortality for head injury in a community.

SP-080

Influence of Pedestrian Environment Improvement on Fall Prevention Neihu Safe Community, Taipei, Taiwan

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Walking is the most healthy and energy-saving type of transportation. Residents of Neihu Safe Community walk a lot and put pedestrian's safety as one of their safety promotion goals. According to 2006 Neihu injury surveillance data, fall stood the third cause of injuries. Most of the injuries occurred on sidewalks. Therefore, a project aimed for better pedestrian's environment was come into operation in Neihu District, Taipei. The Neihu Safety and Health Promotion Association (NSHPA) and the Neihu District Office, Taipei City, co-conducted a field investigation to find out threats on sidewalks and skywalks in October 2006. After 3-hour inspection training, volunteers, including Neihu District officers, college students and local enthusiastic inhabitants, recorded every defect that might be dangerous to pedestrians. NSHPA collected the records and made a report to related official departments which were responsible for repair and maintenance. The same inspection was conducted again in April 2007. This study analyzed the data collected by NSHPA, and shows the results of the sidewalks safety inspection as well as the improvement effects. Number of defects found on sidewalks and skywalks before and after repair was compared. Fall injuries occurred in May through September in 2006 and 2007 were also compared to reveal the effect of the project. It was found that sidewalks and skywalks defects revealed 79% reduction at the second inspection. Fall injuries reduced 23.4%, mostly attributable to the improvement of sidewalks and skywalks. This is a good example of injury prevention with bottom-up and top-down. Pedestrians' environment has been improved, and fall injuries also decreased.

SP-081

Determinants of Participation in Fall Prevention Program among Elderly Fallers in Hong Kong

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Background: Fall injuries are one of the main causes nationally for the loss of independence at the old ages but they are preventable. The acceptance of fall prevention program is therefore the key element to reduce the risk of falling.
Aims: The study aims to estimate the uptake of fall prevention program among elderly fallers and explore the factors related to the participation of the fall prevention program.
Methods: A telephone survey was conducted to the elderly who aged ≥65 who were given a referral of fall prevention program after attending at the Department of Accident & emergency (A&E) due to fall at the NT East Cluster in 2007. The inter-relationships between the socio-demographics characteristics and related factors were explored using multivariate analysis. Results: Total 969 elderly (mean age 80 years) were contacted and 70% of them joined the program. The participation rates were lower (65.8%) in the older age group than the younger group aged under 80 (74.9%) and female (68.5% vs. 73.9% for male). The factors associated with the participation of the fall prevention program included higher education level (OR = 1.79; 95% CI [1.00-3.22]), with chronic illness (OR = 12.31; 95% [6.86-22.12]) and without any aid for walking (OR = 1.78, 95% [1.25-2.53]) after adjusted age and sex of the participated elderly.
Conclusions: Elderly without the indentified characteristics of participation may not receive the benefit from the fall prevention program. It is an important indication for the future development of prevention program in Hong Kong for elderly.

SP-082

Applying Root Cause Analysis to Improve Patient Safety: Decreasing Falls in Postpartum Women

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Objective: To investigate the effectiveness of interventions to prevent falls designed through root cause analysis.
Methods: Under preceding root cause analysis, root factors were classified into four major categories: environment and facilities, procedure, individual, and communication. Among them, communication, environment and facilities were recognized as the most vital factors to facilitate intervention accordingly. The fall prevention program included first intervention with adding live demonstrations and offering a printed education sheet, and second intervention with adjusting rails at the bedside and in the ward, placing anti-sliding pads on the floors of the bathrooms, and enhancing local

light in the bathrooms. This prospective longitudinal study was conducted in two large hospitals in Taiwan, with 2,460 participants in one hospital (intervention) and 2,451 participants in the other hospital (control). Results: In the intervention group, the incidence of postpartum falls within six months before intervention was 14.24 per 1000 patient-days, and dropped to 6.02 per 1000 patient-days within six months after intervention. The control group showed no marked decline in incidence with a rate of 13.72 and 14.05 per 1000 patient-days within six months, respectively. Using the Mantel-Haenszel test to compare the incident rate, there were significant differences ($p<0.001$) between the incidence of the intervention group before and after intervention; and between the latter and each incidence of the control group.
Conclusions: This study provides direct evidence that root cause analysis can be adopted in analyzing causes, and in formulating interventions to reduce the incidence of postpartum falls and improve patient safety.

SP-083

Low Birth Weight: Is Maternal Nutrition Is Associated with It?

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WorLow birth weight is one of the main factors for most of the childhood morbidity and mortality as well as for chronic illnesses in latter part of life. Major determinants for low birth weight in developing countries are poor maternal Nutritional status at conception and low gestational weight gain. A descriptive cross sectional study was done to identify the relationship between maternal nutrition, and low birth weight by using interviewer administered questionnaire with 524 mothers who delivered in maternity wards at teaching hospital Jaffna, during the period of 1st September to 30th September 2008. Interviewer administered questionnaire was used to collect data. Recordings were also made from clinic books, registers of labor rooms and bed head tickets. In this study low birth weight rate was 16.5%. Factors such low BMI of mother, number of parity, folic acid use prior to pregnancy, living in cemented house and house without proper chimney were statistically significant at p value 0.05 level. Food supplementation and home visits by PHM did not significant at same significant level. Low birth weight is still a significant problem. Problem needs early interventions before pregnancy rather than after getting pregnancy.ds over 250 will be cut off automatically.

SP-084

Factors Associated with Adolescent Pregnancy among Adolescent Primigravida Attending Antenatal Care Clinic at Samutsakorn Hospital, Samutsakorn Province, Thailand

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Adolescent pregnancy has been a critical public health problem since most adolescent confront various changes and development in term of physical, emotional, social and intelligent aspects .When they reach sexual maturity, sexual hormones will stimulate their sentiment. When adolescent getting pregnant, the effects are child health, adolescent development and family socio-economic development including national human resource development. The study was retrospective and case-control research with the objective of examining factors associated with adolescent pregnancy among adolescent primigravida attending the antenatal care clinic at Samutsakorn Hospital. Totally 203 adolescent primigravidas were selected as a study group and 203 non pregnant adolescents as a control group. Chi-square test and Odds ratio were used for data analysis. Data collection was conducted by self-administered questionnaires from June to August 2006. The factors which were significantly associated with adolescent pregnancy were occupation, educational level, experience of substance abuse, experience of smoking, sexual risk behavior, knowledge about sexuality, attitude towards premarital sex and peer's sexual risk behavior ($p<.05$). The factors which were the risk of getting adolescent pregnancy were not working/studying, low education, ever substance abuse, ever smoking, sexual risk behavior, and low knowledge about sexuality; agree with premarital sex and peer's sexual risk behavior. In conclusion, appropriate sexuality education in all level of school should be promoted. The safety environment for both school and residence could prevent children and adolescent from risk behavior.

SP-085

Risk Factor of Mortality Rate in Bantaeng District Indonesia 2005-2008

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According to Indonesian health demography survey in 2007, Maternal Mortality Rate (MMR) in Indonesia was 248/100.000 of live birth. This Study aimed to know the risk level of maternal age, maternal parity, birth attendants, and K4 Coverage of antenatal care to maternal mortality incident. Method of study was observational with case control design This study compared case groups of all mother undergoing maternal mortality incident in Bantaeng during 2005 to 2008 and control groups which didn't undergo maternal mortality

incident. The samples were 130 respondents with ratio 1 : 4, 26 cases and 104 controls. Data analyzed by using odds ratio (OR) statistic test 95% CI. The result showed that maternal parity, birth attendants, K4 coverage of antenatal care had a significant association as risk factors of maternal mortality incident with the value of each variables namely : maternal parity (OR 2,728 ; 95%CI 2,124-4,503). birth attendants (OR 3,080 ; 95%CI 2,124-4,503), K4 coverage of antenatal care (OR 3,600; 95% CI 1,446-8,964). While maternal age variable with value (OR 1,456 ; 95% CI 0,541-3,919) didn't have a significant association to maternal mortality incident. Maternal parity, birth attendants, and K4 coverage of antenatal care are risk factors for maternal mortality incident, while maternal age didn't have a significant association to maternal mortality incident.

SP-086

Identification of Causes of Neonatal Deaths in Resource Poor Settings: Validation of a Verbal Autopsy Tool in Orissa, India

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Background: Health planners need evidence-based mortality and morbidity pattern for prioritizing health needs and resource allocation, particularly in settings with weaker vital registration system. Verbal autopsy is the only alternative mean fulfilling the gap. Objective of the study was to validate a VA tool identifying the causes of neonatal deaths (CODs) in resource poor settings.
Methodology: This population based cross sectional study was conducted in two randomly selected districts with 223 Anganwadi centers. Trained non-health personnel administered the semi-structured, pre-tested VA tool to caregivers and ascertained CODs with help of expert algorithm. Medical records (MR) were taken as "Reference Standard" for validation.
Results and Discussion: The mean age at death was 6.2 days. The cause specific mortality fraction was calculated and adjusted for each assigned COD and found no significant difference among VA and MR diagnosis. The average recall period was 38 days with no significant relationship with accuracy of diagnosis (p=0.127). Majority CODs had good sensitivity and specificity except LBW,Sepsis,Tetanus and congenital anomalies. Combining LBW and prematurity to TETS (too-early-too-small) and sepsis related CODs into 'all sepsis' resulted better sensitivity and specificity.
Conclusion: The tool proves to be good for diagnosing birth asphyxia,prematurity,pneumonia,jaundice and diarrhea; and provides room for improvement in identifying deaths due to other CODs. The need of the hour is to improve and implement a VA tool in health system to identify the causes of neonatal deaths with no extra resources.

SP-087

Triage Scoring in Severity of Illness

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The prospective cross-sectional study was undertaken to study the utility of triage scoring for severity of illness based on clinical variables related to Systemic Inflammatory Response syndrome and Advanced Pediatric Life Support in predicting the outcome of sick children and to find an association of final outcome with abnormal clinical signs, to study the utility of triage for need of intensive care management and the utility of triage scoring system for predicting mortality among children between 2 months to 14 years. A total of 570 children requiring hospital admission through the emergency department in Kanti Children's Hospital, Nepal were randomly selected. Chi square test and fisher's exact test was used for data analysis.
About three-fifth was above 5 years of age with acute respiratory tract infections, meningitis/meningoencephalitis, fever under evaluation were the most common diagnosis. Abnormal respiratory rate and temperature were the most commonly associated variables. The mortality was 23.9% in children having more than two abnormal clinical variables whereas the mortality was 2% in children having 2 or less abnormal variables. Systolic blood pressure, capillary refill time, oxygen saturation, and assessment of neurological status based upon AVPU classification showed was significantly associated ($p<0.001$) with the final outcome of the sick children.
Therefore, a severity illness score based on clinical signs alone can predict severity of illness and outcome and can be easily applied in emergency department in order to improve the management of sick children and for counseling with the attendants.

SP-088

Comparison of the Effect of Alcohol Application Versus Natural Drying in Umbilical Cord Care

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Background and Aims: The umbilical cord infection may contribute neonatal mortality and morbidity risk. The rigorous and proper regimen of umbilical cord care, therefore, has become a matter of great concern for prevention of infection. The aims of this study were to compare time to cord separation, parental satisfaction, and infection rate among newborns whose cords were treated with alcohol versus natural drying.
Methodology: The quasi-experimental, comparative study was conducted at a medical center in northern

Taiwan from Jul. 2008 to Jan. 2009. The participating neonates were assigned to two groups based on their birthdates. Group A, whose birthdates were attributed to even numbers, were treated with 95% alcohol; group B, whose birthdates were attributed to odd numbers, were treated with natural drying of the umbilical site.
Results: 127 neonates were recruited for data analysis. Group A contained 64 cases and group B included 63 cases. No newborn developed a cord infection. Time to cord separation in group A was longer than in group B (95% CI for difference: 0.03~2.98; p= .04). The satisfaction scores of group A was lower than those of group B (95% CI for difference: -2.52~-0.45; p< .00).
Conclusion: To our knowledge, this is the first study concerning comparison of outcomes between alcohol cleaning and natural drying for Taiwanese newborn cord care, which dose not support continued use of alcohol. Healthcare providers may replace alcohol with natural drying to reduce medical cost.

SP-089

Human Resource Strategies for Safe Delivery in Nepal

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Background: Nepal faces serious challenges to providing safe delivery services nationwide. Only 18% of deliveries take place in health facilities.
Objective: Determine the extent and causes of health workforce problems affecting the provision of safe delivery services by the Government and recommend strategies to alleviate them. Methodology: Data were collected from all regional health directorates and regional, sub-regional and zonal hospitals. Validation data were gathered from selected health facilities. Data were collected on delivery services, staff availability and skills, and factors contributing to retention of staff. Ten private and NGO facilities were visited, and students in private training institutions were interviewed.
Results: The root cause of safe delivery staffing shortages was not lack of trained staff but the inability of the Government to attract and retain them. Specialist doctors, however, were inadequate. District hospitals particularly lacked doctors with caesarean-section skills and had a poor capability in anaesthetics. They also lacked nurses. Higher-level hospitals had acute shortages of obstetricians/gynaecologists and anaesthesia staff. Poor career prospects and lack of sanctioned posts were serious demotivators for retaining general practice specialist doctors (MDGPs) in district hospitals.
Conclusion: Tackling the identified human-resource problems requires a multi-pronged approach. Promotional opportunities and career-ladders must be considered before developing new training curricula and courses. A team approach should be used for posting staff to district hospitals to ensure a complete caesarean-section team.

SP-090

Relation between the Midwives' Performance in Implementation of Antenatal Care and Quality Work Life in Tasikmalaya City

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Background: There exist a general relation between the health of mother and child and midwives' roles. Midwives have significant roles such as health provider, disseminator of information, conductor and counselor of mother and child healthy. In Tasikmalaya city, the health of mother and child is an important matter considering the death rate amongst mother and child in the city is still high in year 2005 and 2006.
Purpose: This study is designed to observe the linkage between Quality Work Life and Antenatal Care implementation of midwifery in Tasikmalaya by the year 2007.
Method: A descriptive analysis through cross sectional was used in this study. Population target were all of midwifery in 14 health service centers in Tasikmalaya city with the sample were all of population target (53 persons). All of the data were analyzed by quantitative and qualitative approach between Quality Work Life and Antenatal Care operational. It is also associated with the increase of target program as the outcome.
Result: Productivities of the midwifery in health service centers with good planning process, mobilization of implementation program, and controlling evaluation were established in 7 health service centers. Eight (8) health service centers possess a good Quality Work Life and however, there still exist 6 health service centers with bad Quality Work Life in Mother and Child's Health (MCH) unit. Three from nine components of QWL have significant relations with ANC operational of midwifery. They are 'equity of reward', 'safety work environment', and 'proud feeling with the institution'.

SP-091

Emergency Contraception with Mifepristone 10 Mg in Thai Women

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The objectives of this study were to evaluate use of low dose mifepristone 10 mg in term of efficacy, bleeding patterns, side effects and satisfaction of Thai acceptors. There were 120 women who participated in the study. Their mean age was 33.4+/- 7.1 years. All of them were Buddhists and most of them finished secondary school or higher. 31.7% of the women had not been pregnant, 63.7% had had a live birth and 20% had history of abortion. Most women had used oral pill in the past

(58.3%). No pregnancies were occurred among clients. The pregnancy rate was 0%. Few had some side effects. There were statistically difference in interval and duration between previous and treatment cycle. The treatment cycle was longer than previous cycle in term of interval and duration. It was concluded that use of low dose mifepristone was effective, safe, and few side effects.

SP-092

Risk Factors of Pneumonia at Under Five Children in Mattirobulu Pinrang, South Sulawesi Province

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Pneumonia is an acute infection of the lung tissue and sudden inflammation of the lung, with attack to children under five years old and it is mostly caused by various factors. The objective of the study was to examine risk factors related to the incidence of pneumonia in under five children at the Mattirobulu Pinrang, South Sulawesi Province.The design of this research was case control study. Cases (n=80) was underfive children with diagnosed pneumonia at Primary Health Center and control (n=80) was those similar sex without pneumonia. The data were analyzed by using cross tabulation, odds ratio, and multiple linier logistic regression. The study found that age (OR:5.50), low birth weight (OR:5.11), immunization status (OR:5.36), household density (OR:2,76), smoking habit (OR:10.87), and mother's knowledge (OR:8.13), were risk factors of pneumonia. Using multivariate analyses, it showed that the most dominant risk factor affecting pneumonia was smoking (OR: 6.60). We conclude that smoking and immunization were important factors and recommend that health workers should give more attention to educate parents regarding immunization and smoking.

SP-093

Cesarean Section, VBAC and Immigrants in Hsin-Chu County, Taiwan

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Objectives: This study investigated the difference and risk factors regarding the mode of delivery among immigrant women in Hsin-Chu County, Taiwan. It focused on the role of the mother's ethnicity, including Mainland Chinese, Indonesian, Vietnamese, aboriginal Taiwanese and non-aboriginal Taiwanese.
Methods: This is a retrospective study of all mothers residing in Hsin-Chu County, Taiwan and delivering during the period from January 1, 2002 to July 31, 2007. A total of 30,770 computerized singleton birth certificate files were analyzed. Delivery modes and risk factors were compared by using of ANOVA and logistic regression. Non-aboriginal Taiwanese was defined as the reference category. $P \leqq 0.01$ was set as the appropriate one. Dependent variables included total cesarean section, primary cesarean section and VBAC rates. Independent variables included maternal age, year of delivery, health care institution, gestational age, birth weight, infant sex, birth status, congenital birth defect and lunar month of delivery. The trend in cesarean deliveries was also evaluated.
Results: Among all 30,770 singleton births, the total cesarean section rate was Mainland Chinese, 22.0% (326/1,583); Indonesian, 16.0% (181/1,129); Vietnamese, 17.0% (184/1,081); aboriginal Taiwanese, 27.4% (336/1,226) and non-aboriginal Taiwanese, 29.8% (7,692/25,850). The primary cesarean section rate was Mainland Chinese, 16.3% (223/1,369); Indonesian, 9.7% (101/1,045); Vietnamese, 12.1% (123/1,016); aboriginal Taiwanese, 15.6% (162/1,040) and non-aboriginal Taiwanese, 19.4% (4,339/22,323). The rate of VBAC was Mainland Chinese, 9.6% (11/114); Indonesian, 4.8% (4/84); Vietnamese, 6.2% (4/65); aboriginal Taiwanese, 6.5% (12/186) and non-aboriginal Taiwanese, 4.9% (174/3,527). Multivariate regression analysis revealed that ethnicity was a significant predictor of total cesarean section and primary cesarean section rates for Mainland Chinese (OR 0.69, CI 95%: 0.60-0.78; OR 0.83, CI 95%: 0.72-0.97), Indonesian (OR 0.47, CI 95%: 0.40-0.56; OR 0.48, CI 95%: 0.39-0.59) and Vietnamese (OR 0.60, CI 95%: 0.50-0.73; OR 0.52, CI 95%: 0.44-0.61). Aboriginal subgroup showed significant low rate of primary cesarean section (OR 0.77, CI 95%: 0.64-0.91). VBAC rate was found statistically significant high (OR 2.12; CI 95%: 1.11-4.05) in the Mainland Chinese subgroup. Furthermore, the increasing trend of total cesarean section rates was showed both in Chinese-speaking and non-Chinese speaking immigrant subgroups.
Conclusion: Compared to non-aboriginal Taiwanese women, the significantly low total cesarean section and primary cesarean section rates were valid among immigrant pregnant women, including Mainland Chinese, Indonesian and Vietnamese in Hsin-Chu County, Taiwan. Moreover, Mainland Chinese subgroup had the highest rate of VBAC as well. Logistic regression analysis of independent risk factors, maternal age, medical care institution, birth weight, gestational age and birth status were also showing significant effect on mode of delivery. Meanwhile, this study explored upward trend of total cesarean section rates both in Chinese speaking and non-Chinese speaking immigrant subgroups.
Race/ethnicity and social class influence mode of delivery through complex pathways. Further research is needed to identify the social and biologic determinants of it. Proper health policy and strategies should be implemented for women's health.

SP-094

Statistical Reporting of Breastfeeding Rates: The Method Determines the Answer

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Objective: To review the methods used in the statistical analysis and reporting of breastfeeding rates.
Methodology: Using databases from breastfeeding studies in China breastfeeding rates were calculated using different methods identified from reports in the literature.
Results: Breastfeeding is the foundation of infant nutrition and lifetime health. To monitor breastfeeding rates must be reported accurately and consistently. Breastfeeding definitions influence results. In the Zhejiang cohort study the exclusive breastfeeding rate at one month was 59.6% using the 24 hour measurement favoured by UNICEF but only 39.5% using exclusive breastfeeding status since birth. At 3months the rates were 60.7% and 30.3% respectively and at six months were 6.3% and 2.7%. Cohort breastfeeding rates were analysed using life table and Kaplan-Meier survival analysis procedures. Life tables are almost always more concise than Kaplan-Meier survival tables because the widths of time intervals in the Kaplan-Meier procedure depend on the events actually occur, not on fixed equal intervals set by the researcher. The narrower the interval widths set in the life table procedure, the more the two procedures will be close to each other. Life table and Kaplan-Meier survival analysis are only descriptive procedures and if covariates are thought to be important in determining duration of breastfeeding, regression modeling which incorporates covariates, such as Cox regression may be preferred.
Conclusion: Accurate definitions and consistent/standardized observations are imperative for reporting breastfeeding rates. The way breastfeeding rates are calculated determines the results and is important for public health.

SP-095

The Investigation of Affecting Factors on the Biological Features of the Umbilical Cord Blood Units

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The engraftment outcome of umbilical cord blood (CB) transplantation is highly dependent on hematopoietic stem cell content including some laboratory parameters such as CD34, and total nucleated cell (TNC). It would be helpful to predict CB cell count based on the donor-related variables before cell processing. In this study, a total of 1589 CBs preceded from January 2007 to December 2007 were obtained from the Buddhist Tzu Chi Stem Cells Center. We studied the effect of maternal variables such as number of gestation weeks, delivery method, mother's age, birth order on CB characteristics. Besides, neonatal factors including baby's sex, birth weight, cord length, and placental weight were evaluated. The mean of CD34, TNC, cord blood volume and platelet were 28.63(10^3/ul), 88.02(10^3/ul), 93.26(ml), and 222.67(10^3/ul), respectively. CB characteristics were correlated significantly. In multiple regression analysis, mother age and cord length had no effect on these CB characteristics, however, delivery method and gender of newborn significantly affected CB characteristics. The results also indicated that the significant factors influencing CD34 were gestation week and placental weight. For TNC, the significant factors were birth order and gestational week. The gestational week, birth weight and placental weight had significant effect on the volume. Those findings might be useful for consideration to collect more qualified CB units efficiently.

SP-096

Acceptance of Contraception among Married Women in the Reproductive Age Living in the Refugee Camps in Kathmandu, Nepal

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The descriptive cross-sectional study was undertaken to determine the contraceptive prevalence rate, the factors affecting the acceptance of contraception and to find the association between them among married women in the reproductive age living in the refugee camps in Kathmandu, Nepal. Convenient sampling was employed to interview 178 married women. Chi square test and fisher's exact test was used for data analysis.
Only 33.7% were using contraception with injectables being the most favored method. The main reason for using contraception being to limit the births. Side effects was the main reason for stopping the method used in the past. Women with higher age at marriage, higher education and those working outside were more likely to use contraception. About 51.7 % had poor knowledge and was associated with acceptance of contraception ($p<0.001$). Level of attitude did not show any association and majority had an unfavorable attitude. Discussing about contraception with husband, friends and health personnel showed an association and support from husband, parents and friends was also associated with acceptance of contraception. Information from husband, health personnel and media showed an association ($p<0.001$). Source of contraceptive service and waiting time was associated with acceptance of contraception ($p=0.025$ and $p<0.001$). The attitude as well as knowledge of these women regarding the risks, benefits and side effects of the contraceptives remains deficient. Therefore, the result suggests a need for improving the knowledge and attitude among these women living in the refugee camps.

SP-097

The Effect of Residential Conditions on the Intention of Additional Childbearing in Korea

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Background: South Korea's (Korea hereafter) fertility has been very low since 2002 with its total fertility rate lower than 1.3 (1.13 in 2008). There have been a number of attempts to analyze the causes and consequences of low fertility in Korea. These attempts have mainly focused on the individual characteristics (e.g., socioeconomic status, maternal age, parity, or employment status) and the neighborhood characteristics (e.g., social capital, neighborhood socioeconomic status, or child care environments). Although childbearing and childrearing are closely related with residential conditions, little attention has been paid to the role of residential characteristics vis-à-vis fertility in Korea.
Objectives: This study aims to divulge the relationship between various residential conditions and the intention of additional childbearing, particularly focusing on the ownership status and the housing types.
Content and Method: 2005 Korean Census 5% Sample survey data will be employed. Due to social concerns on low fertility, intention for additional childbearing was asked to Korean married women at reproductive age for the first time in 2005 census. Residential conditions will be measured by the ownership status, housing type (e.g. apartment, house, shared house, etc), housing size and the number of rooms per capita, and residential duration.
Contribution: This study is the first to analyze the effect of residential conditions and fertility in Korea. Findings of this study will help better understand the causes of low fertility and prepare effective policy reactions to low fertility.

SP-098

Intention VS Reality: Factors Affecting Breastfeeding Duration. The Results of a Six Week Postpartum Survey

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Aims: To identify the barriers to breastfeeding at six weeks.
Method: A baseline questionnaire was completed by expectant mothers (n=394) who were recruited on the first night of antenatal classes, at eight public maternity hospitals in Perth, Western Australia. Questions were included on breastfeeding intent, breastfeeding attitudes and breastfeeding knowledge. A second questionnaire was completed at six weeks post partum and identified current infant feeding practices. Data at 6 weeks was analysed using Chi-squared tests and to assess the intent-reality relationship McNemar's test was used to take into account the correlated data.
Results: The results to date show that 84% of mothers identified their intention to exclusively breastfeed, 12% combination breastfeeding and formula, 1.5% were undecided and only 2% intended to formula feed only. At six weeks, 47% of mothers were exclusively breastfeeding; 22% were combination feeding and 31% were fully formula feeding. The duration intent also differed significantly from the reality.
Barriers to breastfeeding included attachment difficulties 43%, insufficient milk supply 32%, and engorgement 33%. Only 20% of women reported no problems with breastfeeding.
Conclusions: Realistic information about the barriers to breastfeeding and more emphasis on the benefits of exclusive breastfeeding may help to reduce the premature cessation of breastfeeding. Successful breastfeeding requires commitment, determination and perseverance from the mother with sufficient support from her partner and family to succeed.

SP-099

Do We Need to Consider Socio-Demographic Factors Affecting the Psychological Well Being of an Individual in Planning and Implementing Community Based Public Health Education(CBPHE) Programme? A Descriptive Cross Sectional Study

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Introduction: The psychological wellbeing of a target population is a key area that needs consideration in implementing community based public health education(CBPHE) programmes. Although the association between psychological wellbeing & socio-demographic factors has been widely investigated, there is limited published data at local setting. Therefore, prior knowledge on such factors will help to improve the efficacy of CBPHE programmes.
Methodology: This descriptive cross-sectional study was carried on systematically randomized 240 permanent residents aged 20-39 years at Homagama Pradeshiya Sabha, a sub-urban community in Sri Lanka. Informed verbal consent was obtained from the participants, before allowing them to answer the pretested and validated General Wellbeing Schedule (GWB) questionnaire; Data was analyzed using SPSS-15.
Results:There were 107 males(44.8%). Majority of males(70.1%) were in the age category of 20-29 years while 63.1% of females were in the category of 30-39 years. 53.3%(133/240) were married &70.8%(170/240) were permanently employed. 10%(24/240) of the sample was severely distressed while 48.75%(117/240) were moderately distressed & rest of 41.25%(99/240) were in positive wellbeing according to GWS questionnaire. Gender difference was not statistically significantly associated with adverse psychological status(P>0.05). But being in age category of 30-39 years, unemployment

& being married were statistically significantly(P<0.05) associated with adverse psychological status.
Conclusion: This knowledge on socio-demographic factors affecting adverse psychological status, helps to improve the efficacy of delivering the key messages of CBPHE programmes by refining the target groups.

SP-100

Study on Taiwan Businessmen's Work Pressure and Health Condition in China

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Background: Many Taiwanese businessmen are doing business in China, thus, the population of Taiwanese businessmen in China is increasing, and their health issue becomes more important.
Purposes: This study aims to discuss the relationship between work pressure and health condition for those Taiwanese nationals residing in China for work.
Method: This study conducted survey by structure questionnaire based on purposive sampling. A total of 168 Taiwanese managers living in Shanghai and nearby cities (Kunshan and Suzhou) were sampled.
Results: The average age of the subjects was 40.4±7.9 years old, 77.4% were male and 22.6% were female; their education level was mostly above college (83.7%); 60.1% reported having work pressure. The analysis on their work pressure and health status showed that those with work pressure have medical history of hyperlipemia and neck pain. They have the habit of drinking alcohol. The percentage of having poor sleeping quality in the recent month is higher than that of those without work pressure. In terms of mental health status, Beck Depression Inventory was used for measurement, and the result showed that those with work pressure have a higher score of depression (10.16 score vs. 5.31 score, P<0.05) than those without work pressure. The survey on health-related quality of life (SF-36) found that those with work pressure have lower scores in RP, BP, GH, VT, and MH than those without work pressure.
Conclusions: The work pressure of Taiwanese businessmen in China is related to their physical, mental health status and health-related quality of life.

SP-101

Hardy Personality: Cognitive Responses to Managers' Mental Health in Balancing Work-Family Life

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Stress is inherent in today's life in balancing family and work life demands. The need to balance work and family life is not isolated to women anymore as men's role is increasingly expanding to more than as the family's breadwinner. Today, more men are making efforts to play an active fatherly role. Nonetheless, the expectation of performing excellently at work and to be the star performer at work still prevails. This created a stressful situation. The inability to cope with stressful events can result in undesirable psychological and behavioural outcomes, leading to chronic stress, burnout, poor job performance, absenteeism, withdrawal from the profession, and well-being of individuals. In the long run, it not only lowers down productivity but would increase employers' cost through higher medical bills. Hardiness personality disposition (Kobasa, 1982) as a moderating variable has created a new resurgence of interest in physical and mental health research. It has been argued that hardiness mitigates the potential unhealthy effects of stress and prevents the organismic strain that often leads to illness. Hardiness is particularly relevant because it is theoretically defined as 'a resistance resource in the encounter with stressful life events' (Kobasa, Maddi, & Kahn, 1982, p. 169). On the other hand, research has also found that work and nonwork satisfaction relate to one's mental health. Therefore, it is the purpose of this research to review the coping process of Malaysian managers specifically the individual differences which managers use to cope with stress. The results are expected to evaluate the role of work as well as nonwork roles in affecting manager's mental health. The proposed model would investigate the relationship between stress as a result of balancing family and work life and mental health of Malaysian managers. In addition, the moderating role of hardiness is tested on the stress and mental health relationship.

SP-102

Lessons from Applying Oral History Approach in Community Mental Hospital

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It is apparent that science and medicine would become even powerful and real while they are situated in local narratives. Yuli Veteran Hospital situated in the middle of the narrow long rift valley that stretches 100 kilometers from Taitung to Hualien, is fairly isolated from other towns. The patients have been an even more marginalized population. Over there, patients , who have been institutionalized for years before coming to Yuli, have spent an average of 8 years at private and public hospitals around the island, mostly in merely custodial care. Most had already lost close contact with their families; or the families have long since been exhausted by the burden of care. With these difficult conditions, the professional staff at Yuli faced the fact that they could not treat these chronic patients with the old methods and institutions. The Yuli model of community therapy for psychiatric patients places the patient at the center of the

process. After a lengthy process of familiarization and interaction, the staff of the Veterans Hospital was able to persuade the residents of the town trusting their abilities of self-discipline and autonomy. A support network was extended into the community for the assistance of this employment, which also gave the patients new self-confidence to attempt reintegration into society. The economic outcome was also beneficial, generating NT$3 million (US$100,000) in income. Moreover, the staff is utilizing oral history for the process of developing an even closer collective sentiment between patients and community, which is anticipated to reinforce the results of the program. Supportive environment will shape patients' autonomy in clinical settings and daily lives. Accordingly, patients are not only aware to their medication status but also could support each other through appropriate arrangements. Furthermore, their relatives and boss could be supportive if they recognize the residual function of each patient with the help from professionals and institutions. Finally, medical professional should play the role of empowerment in building three layer of therapeutic community. The narrative method of life history, with close listening to patients, helps them to distinguish the real self from the false self, and this is the crux to whether they can reach a turning point. The process of oral history bring the patient back to his experience of the initiation of illness, and the memory of the feeling of being unwillingly committed to the institution. We have discovered that this external intrusion is linked to his/her own understanding of his/her situation, the suitability of the environment, and whether or not they can exercise self-discipline. This is the starting point for the work of the Yuli staff, to create a link between the inner world of the patient and the outer real world. Also, new role of medical professionals will be recommended.

SP-103

Depression Is Associated with Decrease Physical Performance of Older People

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Aim: To explore the influence and contribution of depression compared to chronic diseases in decreasing physical performance of older persons
Methods: Data from a population-based survey of 765 elderly people aged 60 years and above living in Malacca were analysed. Geriatric Depression Scale was used to assess depression. Presence of chronic diseases was self reported and verified through medical records. Physical performance was based on two outcomes; self reported functional limitation and performance based functional limitation. Two separate models were formulated using the log binomial regression, as the outcome prevalence was high (>10%). This is a more preferable method to the logistic regression when odds ratio is not a reliable estimate of the relative risk.
Results: 2.4% to 36.3% of respondents with one or more chronic diseases had depression. After adjusting for age, sex, social isolation, and cognitive function, depression had the highest significant association with aPR of 1.60 (95% CI 1.09, 2.34) and aPR 2.60 (95% CI 1.79, 3.77) compared with presence of chronic diseases. Population Attributable Risk for performance based functional limitation due to depression was 39.4% (95%CI 15.8, 63.1).
Conclusion: Depression is associated with decrease physical performance greater compared to presence of one or more chronic disease alone. If older people were treated for depression 39.4 % of the performance based functional limitation cases would be eliminated. More efforts should be given to screen, diagnose and treat older people with depression.

SP-104

The Role of Social Support toward Superior Student's Stress Level

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Superior student class program is program that distinguishing student based on their achivement which upper average normal student report. The students must compete each other to be the best in their class, and that situation made them in stressful condition. The aim of this research was to find out the role of social support on students who selected in superior class program. The subjects of this research was 60 students of superior class programs at SMAN (High School State) 1 Bulukumba, South Sulawesi. The data collected based on four scales, which are stress scale, parent social support scale, teacher social support scale and peer group social support scale. The multiple regression analysis was applied to analyze data by SPSS for windows program version 13.0 The hypothesis werw : (1) their was a negative relationship between social support (parent, teacher and peer group) and stress level , (2) their was a negative relationship between parent social support and stress level, (3) their was a negative relationship between teacher social support and stress level, (4) their was a negative relationship between peer group social support and stress level on superior studen class program. The result indicated that their was a negative correlation and significant between social support and stress level on superior student class program with R=0.376 ; R Sguare=0.141, F=3.074 and p=0.035. Social support effectively contribute 14,1% to the student stress level. Parent social support was a negative correlation and significant to the strudent stress level with r=-0.256 and p=0.041. Teacher social support was a negative correlation and significant to the student stres level with r=- 0.100 and p= 0.050, and finally peer group social

support was negative correlation and significant to the student stress level with r=-0.106 and p=0.051

SP-105

The Study on the Effects of the Health Education Group in a Drug Abuser Treatment Center

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Objective: Because the drug abuser treatment center had no correlative education teaching material, this study tried to design group education courses for the problems of body, mind and soul of drug abusers.
Methods: This study adopted descriptive research. the group education courses which lasted for 13 weeks. This study used the self-made assessment chart of awareness of drug education. We collected the data before and after the group education from August 17 to November 16, 2007. And then we proceeded descriptive statistics and inference statistics to analysis these data by the analysis software, SPSS 12.0.
Results: Eventually, we found that these 74 drug abusers were all male, By using the chi-square test, we found that drug abusing behavior could be improved after and before group education accounted for 68.9% and 85.1% (P=0.017) . In the parts of damage of drugs, awareness of infectious diseases and employment resources (P=1.0).
Conclusions: In accordance with the results that mentioned above, conducting group education courses could reach drug abuser' demands and then could improve their abusing behaviors to achieve the effect of drug rehabilitation. Because in the parts of damage of drugs, awareness of infectious diseases and employment resources, there was no significant difference, we should guide correlative knowledge after their admission. In the courses of employment resources, because the abusers could not get employment information in the rehabilitation center, the effects were limited.

SP-106

Alcohol-Associated Excess in Emergency and Injury Service Utilization among Young Adults in Taiwan

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Purpose: This study sought to examine the link between alcohol drinking and emergency and injury service utilization among community-dwelling young adults in Taiwan.
Method: Data were from 2005 National Health Interview Survey (NHIS) and linked National Health Insurance claimed data (NHI). With a focus on sample with age of 18-34 years, information pertaining to individual sociodemographic background and health behaviors was obtained from face-to-face interview in the NHIS (n=6345); service utilization records concerning emergency room and healthcare of injury causes (ICD-9-CM: 800-999) were retrieved from those providing consent to data linkage with NHI (n=5133, linkage rate: 81.6%).
Results: Approximately 28.33%wt (n=1455) drank less than once a week, and the estimate for once or more per week was 10.38%wt (n=542). A dose response relationship appears between frequency of alcohol consumption and the utilization of emergency room and injury-related healthcares (both p-values< 0.001). While simultaneously adjusted for gender, aboriginal ethnicity, household income, religious affiliation, educational attainment, major physical diseases, and mental diseases, once or more per week drinking was associated with 33% increased visits of emergency room (95% CI=1.03-1.72, p<0.05), and 25% increased utilization of healthcare of injury causes (95% CI=0.99-1.59, p=0.06); the observed alcohol-associated excess was less salient once tobacco smoking and betel nut were statistically adjusted.
Conclusion: Higher frequency of alcohol consumption may be modestly associated with increased utilization of emergency room service and healthcare of injury in young adults. Health education program is needed to raise public awareness for responsible drinking and future research may help delineate possible mechanisms.

SP-107

The Relationship between Heavy Metals (HG, PB, CD, MN) and Maternal Nationality on Children Development

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Background: Developmental delay is a common problem in pediatrics, with an estimated population prevalence as high as 10%. Number of developmental delay children in Taiwan has increased in recent years. Many studies have observed that heavy metals, such as mercury and lead, affect children's cognitive behavior and intelligence. However, evidence is still insufficient to establish this association between heavy metals and developmental delay in children.
Objectives: The aim of this study is to examine the effect of family, nationality, environmental exposure and child characteristics on children development, and to analyze their association with respect to heavy metals detected in their blood sample.
Methods: This cross-sectional study enrolled 118 children in Nantou from Nov. 2008 to Jan. 2009. We used interview questionnaire to collect data and used D! enver Developmental Screening Test Chinese Version (DDST-Chinese version) to estimate the stages of children development. Blood levels of mercury, lead, cadmium and manganese were assayed by inductively coupled plasma mass spectrometer (ICP-MS).
Results: For every log-unit increased in blood cadmium level, the gross motor skill failure rate was increased by 2.56% (p=0.010). Children with low birth weight

(<2500g) had higher failure rate in gross motor skill, langue, social contact, and children development (all categories). Maternal nationality did not have significant effect on children development.
Conclusion: Cadmium affects the gross motor skill performance of children. The development of immigrant children is not worse than those born domestically. Low birth weight is an important factor affecting children development.

SP-108

Possible Age Differences in the Predictors for Incident Use and Long-Term Use of Benzodiazepines (BZDs) in Community-Dwelling Population in Taiwan

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Benzodiazepines are one of the most commonly abused psychoactive medications worldwide. This study sought to understand predictors of incident use and long-term use (LTU) of Benzodiazepines (BZDs) in community-dwelling civilians in Taiwan and probe possible adult-elderly differences in such links.
The data were from 2005 National Household Interview Survey (NHIS). Information concerning pharmacological services and medical records in 2004-2006 National Health Insurance Research Database were subsequently retrieved upon consent (linkage rate~70%). Building up 15,508 individuals who had received any BZD prescription in 2004, incident use was defined by having received BZD prescription at least one day in 2005; as to LTU, having 180-or-more BZD prescription days between 2005-06. Complex survey analyses were performed to estimate association strengths.
Annual incident rate of BZD use in adults and elderly was 7.26% and 10.98%, respectively. Among BZD new users, roughly one in 6~7 elders develop LTU, significantly higher than 5% in adults. Adult-elderly differences appear in the predictor profile of LTU. For example, higher educational attainment and having more physical disorders in individual characteristics were modestly associated with BZD LTU in adults (aOR=1.4~2.1); whereas for elderly BZD users, only service-provider attributes matter (receiving BZD prescriptions from ≧2 specialties, aOR=12.47).
Our study found possible adult-elderly differences in not only the occurrence of incident use and LTU of BZD, but also the predictor profile. Future health education and pharmacological policy should integrate age-tailored strategies to reduce BZD LTU related problems.

SP-109

The Effect of Floating in Seawater on Physical and Psychological States- Evaluation of Anxiety

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Purpose: The purpose of this study was to examine the effects of floating in seawater on physical and psychological states.
Subject and Methods: The study was performed with a randomized , nonblinded, crossover design. The eighteen subjects aged 19-29 (21.0±2.2 y) who had no medical treatment and agreed to the informed consent are selected as participate. The subjects were randomly assigned to either an intervention of floating in sea-water (FS) or to a control group of lying on a bed (LB), and performed both trials after 48h washout periods in Thalassotherapy health-spa facilities, Okinawa, Japan in May, 2006. To evaluate the effect of trials on physical and psychological state, STAI (State-Trait Anxiety Inventory) and VAS (Visual Analog Scale) were measured at before and after of each trial.
Results: A significant difference was found between SF and LB on the state anxiety scores after the intervention.On the subjective evaluation on the psychological state, the score of will, mood, concentration and appetite state decreased significantly after intervention, while that didn't change significantly in the control.
Conclusions: As a conclusion, the floating in seawater as a thalassotherapy had better effects to decrease anxiety and improve psychological state, and it might be well recommended as it was good to relaxation stresses and improve mental health.

SP-110

The Relationships of Coping Behaviors with Bereavement, Attachment Styles, and Anticipatory Mourning Reactions among Families of Terminal Cancer Patients in Kaoshiung Hospice

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The main purpose of this study was to explore the relationships of coping behaviors with bereavement, attachment styles, and anticipatory mourning reactions among families of terminal cancer patients, and to understand the differences between anticipatory mourning reactions and bereavement-related factors, such as sex, age, religion, health condition and social support.The subjects of this study were 142 families in Kaoshiung Hospice. The subjects were evaluated by Attachment Style Scale, Brief COPE Scale, and RGEI Scale.The data were analyzed by SPSS 12.0. The results were summarized as follows: 1.The anticipatory mourning reactions among subjects were significantly effected by sex, health condition, sources of social support, and relationship quality, such as conflict or dependence. 2.Attachment styles were significantly

related with the differences in "planning", "positive reframing", "religion", "denial", and "behavioral disengagement" of coping behaviors with bereavement. 3.Attachment styles were significantly related with the differences in "existential concerns", "depression", and "physical distress" of anticipatory mourning reactions. 4.The anticipatory mourning reactions among subjects correlated negatively with coping behaviors of "active coping", "positive reframing", "acceptance", "using instrumental support", and "venting", whereas positively with coping behaviors of "denial","behavioral disengagement", and "self-blame".Suggestions were proposed in accordance with the study result.

SP-111

The Analysis of Exercise Behavior and Depression Tendency in Taiwan: Results from Taiwan National Health Kap Interview Survey in 2002

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This study aimed to: (1) describe the prevalence of exercise behavior and depression tendency in Taiwan, and (2) analyze the relationships between exercise behavior and depression tendency. Data from Taiwan National Health KAP Interview Survey were analyzed. People of age 15 years and older (n=26,755) were reviewed by a three stage systematic random sampling of households in this cross-sectional study. The relationships between exercise behavior and depression tendency was analyzed by Chi-square test and logistic regression. The main findings of this study were as the following: 1. The subjects without exercise behavior were 44.8%. 2. The subjects with depression tendency were 4.8%. 3. Subjects who were males, older than 65 years old, illiterate, widowed, not working, at lower health status, at lower economic level or living alone were more likely to exercise regularly. 4. Subjects who were females, elderly and adolescents, widowed, divorced, separated, at lower health status, at lower economic status or living alone were at highest risk of depression tendency. 5. The relationships between exercise regularity and depression tendency were negative; and that between exercise intensity and depression tendency were positive. 6. When demographic factors were adjusted, regular exercise was the major factor to decrease depression tendency, and the relationships between exercise intensity and depression tendency were positive. According to the finding, we may apply to help develop the policy for preventing depression and promoting physical and mental health.

SP-112

Effects of Work Support Program for the Person with Disabilities Rehabilitation

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Purpose: The purpose of our study was to establish fundamental job support environmental at psychiatric department clinical site.
Subjects and method: We adopted Randomized-Controlled Trial to measure the effectiveness of starting job program during the six months. Twenty people with schizophrenia were randomly assigned to either an intervention group (n = 10) or to a control group (n = 10). Regards to judgment scale of intervention effect, we conducted several scale for three times, pretest, 3-months posttest, and 6-months posttest and these scales are Positive and Negative Syndrome Scale, Life Assessment Scale for the Mentally Ill and Self-Efficacy for Community Life scale. We also used General Self-efficacy Scale and Work-Personality scale.
Result: The score of GSES in the control group increased significantly after 6 months, but that in the intervention group did not. The score of SECL in both the control group and the intervention group did not change significantly between pre-test and post-test. The score of Work-Personality in the intervention group increased significantly between pre-test and 2-months post-test, and between pre-test and 4-months post-test, whereas that in the control group did not.
Conclusion: Considering above results, this work support program has proved that it has learning effect on schizophrenia in terms of their current recognition and job skills. Thus, this program has demonstrated its effectiveness toward schizophrenia for their social reinstatement support.

SP-113

Medicine Inefficiency among the Insured in Indonesia: A Case Study in a Hospital in Jakarta, Indonesia

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Physicians tend to be less sensitive to the costs of healthcare services when the patients covered by insurance. This makes the physician provides unnecessary of healthcare services, including provide prescriptions more medicine. One of the types of inefficiency is the unused medicine that has been priscribed by the physician. To test a hypothesis of whether the physicians prescribed more medicine among the insured patients, a study was done in a hospital in Jakarta. The study include 236 insured patients as the sample, which was selected randomly from 2.225 inpatients during the year 2008. The results confirms that there was an inefficiency of prescribed medicine, among other, due to (i) replacement of existing medicine, (ii) the physician prescribed more medicine than needed, and (iii) the doctors prescribe more medicine in order to be stocked of the ward. The inneficiency figures reached about 19% of the total medicine costs, consisting of 21% of the medicine covered by insurance and 5% of non-insurance. Our multiple linear regressions confirms

that education, age, experiences, and department of obgyn (vs other departments) were the determinants of ineffiency. The most predominant factors contribute to the inefficiency was the obgyn department. This study recommends to adopts a single-dose prescription policy.

SP-114

Pediatricians' Role of Caring Preschool Children in Taiwan under the National Health Insurance Program

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Background: The National Health Insurance (NHI) covers more than 98% of the 22 million people in Taiwan. Because referral is not mandated, competition among specialties exists in caring preschool children. The aim of this study was to analyze the utility of outpatient service among preschool children to investigate the pediatricians' role in caring preschool children. We also analyzed how the density of specialists induces demand by using the NHI database.
Methods: We used the systematic sampling file, CD20040, from the bureau of NHI, Taiwan, as the data source for analysis. We linked the file to the registries for medical personnel and the board-certified specialists to analyze the specialty distribution. We also linked to the registry for contracted medical facilities to analyze the distribution in different levels of hospitals. Results: In total, 56,144 outpatient visits for preschool children were analyzed. Among them, 59.1% of outpatient services for preschool children were provided by pediatric specialists, 20.7% by otolaryngologists, 13.5% by family medicine specialists, and the other 6.7% by general practitioners. Most of the visits occurred in the primary care setting (84.1%). As children grew older, a significant decline in the pediatric specialists' visit rate and an increase in the otolaryngologists' visit rate were observed in the primary care setting. Young children visited pediatric specialists more frequently. The pediatric specialists' visit rate was higher in the northern urban areas. It was also significantly correlated with the density of pediatricians. Conclusion: In summary, otolaryngologists compete with pediatricians in the primary care of preschool children in Taiwan. The proportion of visits to pediatric specialists was significantly correlated with the density of pediatricians among different counties. The NHI should modify its policy to make the medical system more equitable.

SP-115

Managerial Effectiveness of Universal Coverage Insurance Scheme in Thailand

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The objective of this study is to evaluate managerial effectiveness of Universal Coverage Insurance 2006-2008. Analysis of secondary data from 3 resources (National Statistic Office, National Health Security Office and Assumption Business Administration College Poll) is the method of this study. Results indicated that 61.2 million Thai populations was covered by National Health Security Office (97.94%). Regarding quality assurance of primary care unit, there was an increase in competency of health workers and compliances with the standard of hospital assurance (HA) or ISO 9001:2000, from 91.36% to 94.33%. Even though there were health service providers for 5 work days per week, but there were problems such as standard of health care, delayed of services, follow up / referral system, refusal of treatments by providers and quality of pharmaceutical products. Analysis of the 3 data sources indicated that the universal coverage insurance was able to: 1) decrease household expenses, 2) increase quality of life for Thai population, 3) find no definite direction of other health funding, and 4) prevent litigation by paying compensation for those who received medical treatment errors. Recommendations for universal coverage insurance program are as followed, provide enough cash flow for primary care units; control cost of pharmaceutical products and increase quality by using co-payment concept, local budgeting and combining other health funds.

SP-116

Did Patients and Primary Clinic Physicians in the "Family Physician Integrated Health Care Program" Have the Same Expectations of Health Care Services?

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In 2003, Bureau of National Health Insurance (BNHI) promoted "the family physician integrated health care program (FPIHCP)" to offer a complete and continuous health care for patients in Taiwan. In this program, BNHI provided patients in this program with 24-hours telephone consultant, primary health care, referrals, etc. But, did the contracted clinical physicians have intentions to providing these services and can these services meet participants' expectations? The purpose of this study is to focus on what kind of health care services clinic physicians would like to provide with and how these services meet demands of patients in the program. Clinical physicians and patients involved in FPIHCP were recruited in this study. Questionnaires sent out for all of 163 clinical physicians in southern Taiwan and 106 returned. Patients were randomly selected to respond the questionnaire with consents. A total of 454 patient questionnaires were used in this study. Contents of the measurement included demographic variables, 24-hours telephone consultant, informing patients to having health checkup, etc. Data were analyzed by SPSS10.0 statistical

computer software. Differences between demographic variables and expectation items were analyzed by t-test and ANOVA. The physicians had lower willing to provide were 24-hours telephone consultant (3.1± 1.5), to inform patients to receive pap smear (3.7± 1.2), and to have health checkup (3.8± 1.1). But patients in FPIHCP have very high expectations in 24-hours telephone consultant service (4.4±0.9) and informing them to receive Pap smear (4.1± 1.2), and to have health checkup (4.3± 0.9).

SP-117

Literature Review: Factors Which Influence the Coverage of Social Health Insurance in Mongolia

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In Mongolia, 95 percent of SHI coverage was observed after two years of the SHI system introduction in 1994, declined to 87.6, 74 percent in 2000; 74 percent in 2006. Aim of the research is to describe factors which influence the SHI coverage in Mongolia and examine their effect on the coverage so that appropriate recommendations can be made to Policy makers. This review is based on various papers selected from a variety of Health journals, health financing documents obtained from WHO, WB and other sources. The results of this research suggest that differences in lifestyle, economic situation and administrative capacity of the SHI organizations in the urban and rural populations were the primary reasons for the existing differences in the coverage between these two populations. The cessation of insurance premium government subsidies for the students and herdsmen from low income and vulnerable group is the main reason for recent decline of the SHI coverage. The decline of the SHI coverage of the country can be further explained by the marked reduction of the SHI coverage in the rural part of the country but also very low increase in rate of coverage in urban areas. Improving the management of collecting premium according to the traditional lifestyle of the people in the rural areas and including student's premium for SHI in the university's tuition fee in order to increase the SHI coverage for students are recommended strategies to increase the SHI coverage of Mongolia.

SP-118

Physician Characteristics Associated with Repeat Use of CT and MR Imaging

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Object: Use of high-cost imaging modalities, such as computed tomography (CT) and magnetic resonance (MR) imaging, has increased 50% between 2000 and 2004. Repeated examinations account for one-third of these high-cost radiological examinations. The purpose of this study is to evaluate the relation between physicians' characteristics and repeated CT and MR imaging within 90 days, using a nationwide population-based dataset from Taiwan's National Health Insurance system.
Methods: All physicians who ordered CT and MR imaging examinations between 2004-2005 were identified. We analyzed the total number of CT and MR scans, the number of repeat scans and the repeat scan rate, according to physician characteristics (specialty, age, gender, and practice hospital). A multivariate logistic regression analysis was performed to explore the adjusted relationship between physician characteristics and their rate of ordering repeat CT and MR imaging.
Results: A total of 16,307 physicians were responsible for a total of 2,152,292 CT and MR scans during 2004-2005 in Taiwan. The repeat scans accounted for 21.5% of the total. Male physicians and physicians aged 41-50 years ordered more repeat scans. Internal medicine is the most frequent repeat users of CT/MR scans. Internal medicine physicians ordered 44.3% of all scans, and 50.6% of all repeat scans. Surgeons ordered 40.4% of total scans, and 38.5% of repeat scans. Family doctors, OBS/GYN, and pediatrics rank the last among the specialists. Physicians who practice in medical centers ordered the most CT/MR scans. Conclusion: Our study shows that repeat use of CT and MR scans is related to physicians' characteristics.

SP-119

Hospitalization Costs of the Acute Hepatitis a Cases in Mongolia

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Background: Hepatitis A (HAV) was reported 35 per 10 000 in Mongolia in 2008, which increased by two times in comparison with cases registered during 2003-2007. An outbreak of hepatitis A has been ongoing with 18 230 confirmed cases reported in 2007-2008.
Objective: The objective of this study was to analyze data of the morbidities, average stays in hospital and costs associated with the hospitalization of hepatitis in 2008.
Methods: Data on epidemiological characteristics of hepatitis A for children aged 0-15 who admitted to the National Center for Communicable Diseases collected by the Health info Data Set. National hospitalization rates were calculated for hepatitis A. Morbidities, mean and average length of stay to hospital, and mean medical cost of hospitalization were analyzed.
Results: The total number of hospitalized patients with hepatitis A diagnosis was 1291 subjects. Fifty one

percent of hospitalized hepatitis A was diagnosed among boys. The average stay in hospital caused by hepatitis A was 12 days. Total cost of treatment was 6 677 USD per all subjects in a year, it comes from budget of the public hospitals. Estimated 110 251 USD per year expended by Health Insurance Fund, however patients spent 109 353 USD out-of-pocket payment for hospital services in 2008. Forty four percent of the family income goes to the non-medical cost.
Conclusions: During the wide outbreak hospitalizations, ambulatory visits, and their medical and non-medical expenditures due to hepatitis A cases have been increased among all age groups in the country.

SP-120

Analysis of the Impact Factors of Hypertension Refill Prescription on Healthcare Utilization in Taiwan

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Background and objectives: Because aging of population and change of lifestyle in Taiwan , the type of disease is transformed from acute infectious disease into a chronic disease, and ages fast of population structure. And the number of out-patient clinic has always been high since the Health Insurance starting, therefore the Bureau of National Health Insurance in order to reduce unnecessary outpatient amount, they encouraged physicians who treat chronic patients with stable condition can use chronic refill prescription.
Methods: This study data files provided by the National Health Research Institute in 2006 and its name is million sample date . With the assistance of the Bureau of National Health Insurance, the researchers linked the Ambulatory care expenditures by visits data(CD), and the Details of ambulatory care orders data(OO). The study was conducted on a nationally representative sample of 909,325 beneficiaries and local in 2006.
Results: Study found that the prescribe ratio is raise (28.78%), but the ratio of the second dispensed only the original half of the prescribe (47.33%), while the third is a lower percentage (only 23.94 %), shows the effect is poor that implementation of chronic refill prescription in Taiwan
Conclusions: The results can be seen, if you would like to enhance the effectiveness of the implementation of refill prescription, not only Physicians need to raise the ratio of the prescribe of refill prescription but also People need a good habit of medical treatment, recommendations should continue to promote knowledge of refill prescription on people.

SP-121

Development and Validation of an Instrument to Identify Patients with Knee Osteoarthritis in the Community

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Introduction Osteoarthritis (OA) is the most common form of joint disease in the world. Objective To develop and validate an instrument to identify patients with knee osteoarthritis in the community Methodology An instrument was developed after selecting an appropriate definition and classification criteria to identify knee OA patients in the community. Definition and the clinical only criteria for classification of OA of the knee given by the American College Rheumatism were selected following perusal of literature and “Delphi” technique. Selection of appropriate pain and stiffness scales was achieved by the Principal Investigator (PI) and the supervisor who is a specialist in rheumatology. Judgmental validity of the instrument was assessed by the panel of experts. Criterion validity was determined by assessing 93 patients with knee OA and 67 patients with knee pain of other origin who have attended the Rheumatology Clinic at Colombo South Teaching Hospital. Consultant Rheumatologist’s diagnosis was considered as the Gold Standard. Results An instrument comprised of 22 items was developed and named as Knee Osteoarthritis Diagnosis Instrument (KODI)-Sinhala. Experts who participated in the opinion survey proved the judgmental validity. Criterion validity was assessed by calculating the sensitivity (90.3%) and specificity (88%) of the KODI-Sinhala by comparing the final diagnosis made by the Consultant Rheumatologist with that of the PI. High reliability of the instrument was confirmed by high test re-test reliability (kappa statistic = 0.96, 0.97). Conclusion: KODI-Sinhala was found to be a valid and a reliable instrument.

SP-122

Do Non-Communicable Diseases Cluster in Suburban Settings in Sri Lanka?

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Background: Non communicable diseases (NCDs) are on the rise in Sri Lanka owing to the demographic transition and change in lifestyle and environment related to recent urbanisation. They tend to occur early and follow a severe course.
Methodology: A cross sectional study was carried out in Pitakotte health area, which is a suburban setting located in the district of Colombo. A total of 100 households were surveyed using a cluster sampling method. Household and individual information on common NCDs ever diagnosed by a medical person was collected by public health midwives using an interviewer-administered questionnaire.

Results: Amongst 325 adults ≥ 18 years of age (Mean age=43.7, SD=16; Females=52.9%, n=172), diabetes mellitus was the most common NCD (10.2%, n=33) followed by hypertension (9.5 %, n=31) and elevated lipids (7.1%, n=23). Heart disease was least prevalent (3.7 %, n=12) with only 66.6% currently on treatment. At individual level, more than one fifth of the adults (21.8%, n=71) had at least one of the above mentioned NCDs. Of them, 18.3% (n=13) had 2 NCDs, 4.2% (n=3) had 3, and 4.2% (n=3) had 4 NCDs. Majority of these 71 individuals were females (56.3 %, n=40) with a mean age of 54.8 (SD=13). At household level, 55% of the households had at least one person with a NCD with an average percentage of 39.9% of NCD patients per household.
Conclusion: NCDs cluster within individuals as well as at household thus factors associated with NCDs need to be identified at these levels.

SP-123

Prediction Factors for Readmission in Heart Failure Patients in National Cardiac Center Harapan Kita

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Background: Readmission event in heart failure patients is one of the biggest problem than any other degenerative diseases. High cost is a burden for people and the country. In USA, since 1979 readmission event has increased 164% and has reached $ 29 billion, mean while Canada spent the half of health cost for heart failure patients which reached 1.4 billion dollar Canada for 3 years (year of 2000-2003). Because of that it is important to know what factors that influence readmission event in heart failure patients
Methods and Results: This research used cohort retrospective design; observation has been done retrospectively for two years (2006-2008). The number of sample size is 158 which collected from medical records. We used Cox Regression as data analysis. Factors that influence readmission event are health insurance, compliance, asthma, myocardial infract, heart rate, and age.

SP-124

Cancer Is one of the Leading Causes of the Morbidity and Mortality among the Population of Gobi Zone, Mongolia

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Background: An administrative unit of the aimag consists of 15 somon, 68 bug, population of 47959 and the age group structure - 31.41% is 0-16, 19.70% is 16-25 year old children, 25.74% is 30-49, 8.30% is 50-65 year old people and 5.1% is over the age of 65. Top 5 mortality causes are the following diseases in the year of 2008. 1. Circulatory system disease, 2. Cancer, 3. Trauma, 4.Respiratory organ system disease, 5.Gastrointestinal organ system disease In 2008, 4267 people was diagnosed with cancer and 3033 people died from this disease in our country.
Study result: From 2004-2008 or in last 5 years, 421 new cases of cancer were registered and 326 people died from cancer. Percentage of early cancer detection was 16.5% in year 2004 and 26.7% in year 2008. Study of the cancer morbidity rate for the year 2008, liver cancer occupied the first place /36.0%/, lung cancer the second /18.6%/, cervical cancer the third /9.3%/, oral cavity and esophageal cancer the fourth /6.9%/ and stomach cancer was in fifth place /5.8%/. Percent of late stage diagnosis of liver cancer was 92.3% in 2004 and 68.7% in 2008. Mortality from cancer was increased from 25.3 in 2004 to 30.9 in 2008, per 10'000 population. Conclusion 1. Liver and lung cancer were predominant in overall cancer cases. 2. Cancer prevalence showed tendency to increase year-over-ye

SP-125

The Study for the Prevalence of Metabolic Syndrome and Its Associated Factors among the Elderly in Taiwan

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Metabolic syndrome has become a significant factor related to cardiovascular disease. The aims of the study are to analyze the prevalence of the metabolic syndrome of the elder and the related factors in Taiwan. We used the data from the Elderly Nutrition and Health Survey in Taiwan (NAHSIT) conducted during 1999-2000. The definition of Metabolic syndrome was drawn from the criteria announced by the Department of Health, Executive Yuan, Taiwan in 2006. The SPSS software version 12 was employed for the statistical analysis. The results found that the prevalence rate of the metabolic syndrome in Taiwan elders is 40.0%, the figure is 50.2% in female and 30.3% in male, the people who aged 65 to 69 have the highest rate of 43.8% and the lowest rate (22.1%) was found in the elder who aged over 80, the difference of the prevalence rate between the different sex and age groups both reached the significant difference ($P < 0.05$). We also found that the people who married, lower income ,vegetarian and alcohol drinkers have higher prevalence rate of metabolic syndrome. Besides the above factors, the result of the logistic regression found that the people who ate poultry less than 5 times a month had the higher tendency to have the metabolic syndrome than the people who ate poultry more than 5 times a month, the OR is 1.37 ($P<0.05$).

SP-126

Projection of Mortality of Cardiovascular Diseases of Mongolia

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The percentage of non communicable diseases tends to stably increase among causes of mortality in Mongolia. The study was done by using descriptive study. As of 2007, ishemia is most leading cause of mortality of CVDs in nationwide. Moreover, as of 2015, this disease will remain as most leading cause of mortality, particularly in central region. Mortality caused by insult accounts for high percentage and as of 2015, it tends to increase up to 15.4, ischemia is up to 13,6 while arterial hypertension will decrease up to 1.7 The ischemia is also most leading cause of mortality in southern region and as of 2015, mortality rate of ischemia is estimated to be 15.7 which is twice lower than in central region. The mortality rate of CVDs tends to increase up to 27.6 as of 2015 in southern region. The mortality rate of insult and cardiac ischemia was in same level until 2003; however, since 2008 the mortality caused by ischemia tends to be priority. The mortality rate of CVDs were 20.8 in 2007 in capital city and as of 2015, it is estimated to be stable /20.1/. The mortality caused by cardiac ischemia and insult is in same level and as of 2015, it is projected to increase by 4.0 compared to current level, however, arterial hypertension tends to decrease. The mortality of CVDs among population of Mongolia is projected to be increased in regions differently.

SP-127

Occupational Health Services: Is Primary Health Care a Viable Plan

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With the onset of industrialization, the need to provide occupational health services (OHS) in this country was felt as far back as 1980s. Together, ministries of health, labour and education identified a strategy for providing OHS by integration with primary health care (PHC) system of existing national health services. To facilitate this integration, the Department of Community Medicine, Faculty of Medicine, University of Colombo, commenced training of medical and para-medical personnel of Health Department in occupational health and safety. The training was designed for medical officers in charge of the Primary Health Care (PHC) Units and public health inspectors responsible for occupational health and safety of the working community. The training has continued for over 25 years and has been extended to medical officers outside Health Department and has imparted knowledge and skills in promoting health and safety in the work place and among working community. The training has generated a pool of resource persons who can play a key role in OHS at PHC level. This approach has maximized the coverage of work places through a community-based approach. Department of Health Services too has been successful in setting up two occupational health units in the western and southern parts of the country and is envisaged to establish more units in the future. Other support for development of OHS has been through research and development of training material.

SP-128

The Spatial Distribution and Habitat Characterisation of Aedes Aegypti and Ae. Albopictus around Tourism Area

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The knowledge of the spatial distribution of Dengue Vector Mosquitoes is important step to make planning and to implement effective vector control program. The study aims to analyses spatial distribution and ecological characterisation of artificial and natural breeding habitats of Aedes aegypti dan Ae albopictus. Larval collections were conducted in 182 houses located in eight villages around Bantimurung tourism area, South Sulawesi from March to April 2009. Data were analyses using Arcview GIS 3.3. The result shows that a total 447 breeding habitats sampled like plastics container (25.3%), earthen jars (23.3%), cements (17.9%), rubber tire (11.4%), metal containers (6.3%) and natural habitat (15.2%). Earthen jar is most habitat preference for Ae aegypti, while banana leaf, tire and drum are most habitat preference for Ae albopictus. Water temperature of habitat ranged from 25C to 34C with average 28.2 C for Ae aegypti and 28.6 C for Ae albopictus habitats, while pH habitat ranged from 5 to 8 with average 7.2. Larval density indicates were 81% House Index, 75% Container Index and 184 Breteau Index. Mostly larvae was identified as Ae. albopictus (81%) and less Ae. aegypti (18.8%). Ae aegypti habitats were found mostly in villages located along tourism area streets. It can be concluded that a few Ae. aegypti (as main dengue vector) was bred mostly in earthen jar in village located near tourism area.

SP-129

Implementation of OSH Requirements in SMEs in Malaysia

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Occupational Safety and Health issues are increasingly receiving attention and found as important in Malaysian Industrial Relations. In an operational analysis report of the Occupational Safety and Health Regulations (Penggunaan dan Standard Pendedahan Bahan Kimia Berbahaya Kepada Kesihatan) 2000 has found that 80

percent of more than 800 workplace investigated failed to adhere fully to regulations (Abdul Rahman, 2007). Mass medias are also continously reporting various accidents at the workplace which results in deaths. As a developing nation, improvements to its workers safety and health issues should go hand in hand with Malaysia economic boomingWith the increased number of its small and medium enterprise (SME), Malaysia is facing greater challenge to monitor that OSH requirements are adhered to in spite of trying to stay competitive and survive with its limited capital or financial resources. Limited capital would resulted in limited number of workforce on their payroll and efforts toward preparing an effective occupational health and safety code of practice. The United Kingdom recently had proposed Occupational Safety and Health implementation system scheme designed specifically to assist the small and medium enterprise to implement and fulfill the existing acts requirements effectively (Anonymous, 2007). United Kingdom Safety and Health Executive which has the enforcement authority of occupational health and safety in the country has identified the needs for leadership in the management of occupational health and safety matters. After making a comparison of implementation models of occupational health and safety of two developed nations namely United States and the United Kingdom, it is concluded that the involvement of various parties including the public in policy making, the development of appropriate infrastucture and human resources, enforcement autonomy, focused job scope within department, appropriate language usage, training inclusive of all forms of diversity at work and appropriate penalty are key success factors at reducing death rates, accidents and lost work days at the workplace for these two countries (Khoo, Kh'ng, Chee et al., 2007). Through questionnaire distributed to SME in the northern part of Malaysia, results were analysed and findings with regard to the implementation of OSH in workplace is discussed.

SP-130

Aircraft Noise Pollution Study and Community Annoyance: A Case Study of One International Airport in Thailand

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Aircraft noise exposure on the community surrounding the international airport in Thailand depends on the operation of airport. These may cause negative effects to residential area and workers in the airport. This research aimed to study noise pollution level generated from the airport and the annoyance in the communities nearby. The monitoring of equivalent continuous noise levels in 1 second (Leq. 1 s.) were carried out in 4 various positions at both sides of runway end and residential areas during aircraft landing and take-off. Noise exposures were measured consecutively in two days in order to assess the relationship between aircraft noise levels and number of flight (landing and take-off) in the various time of the day. The level of aircraft noise exposure expressed by WECPNL (Weighted Equivalent Continuous Perceived Noise Level) so called aircraft noisiness index was investigated. Social surveys were also carried out to people living in the communities nearby. The results showed that the aircraft noise levels at measured locations were strongly associated with number of flight for each time of the day. Noise pollution problem was raised as one important problem generated from airport operation (84%). The noise exposure levels were higher than the WHO recommended limit that may cause annoyance and health risk to the workers who stay in the airside and people living in the community nearby.

SP-132

Prevalence and Patterns of Burnout among Nursing Officers Working in Government Teaching Hospitals in Colombo

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Introduction: Burnout, an important negative outcome of chronic occupational stress, is characterized by a syndrome of emotional exhaustion (EE), depersonalization (DP) and a sense of low personal accomplishment (PA). There is minimal information on burnout among Sri Lankan nursing officers.
Objectives: To determine the prevalence of burnout among nursing officers working in teaching hospitals in Colombo using the Maslach Burnout Inventory-Human Services Survey (MBI-HSS) validated to Sri Lankan context.
Methodology: A descriptive cross sectional study was conducted in six teaching hospitals in Colombo among a stratified cluster sample of 1356 nurses. The MBI-HSS validated to Sri Lankan context was used as a self-administered questionnaire and prevalence of burnout and its three dimensions were determined.
Results: The response rate was 90.4% (n=1356). Mean scores for EE, DP, PA subscales and total MBI were 14.5, 3.8, 34.7 and 24.6 respectively. Overall prevalence of burnout was 27.9% (25.51-30.29) with prevalence for subscales being: EE 26.4% (24.05-28.75); DP 17.8% (15.76-19.84) and PA 32.7% (30.2–35.2). Burnout was commoner among younger (OR=5.7, 3.6-8.9), unmarried (OR=2.1, 1.6-2.6) nursing officers and those working in paediatric wards (OR=7.3, 3.4-15.8) and ICUs (OR=7.4, 3.6-15.2) compared to OPDs/other units.
Conclusions: A considerably high proportion of Sri Lankan nursing officers in government teaching hospitals are having burnout.

SP-133

The Associated Factors of Insomnia among the Nursing Staffs in the Psychiatric Teaching Hospital

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Objectives: The goal of the study was to explore the associated factors of insomnia among the nursing staffs in the psychiatric teaching hospital.
Methods：The study is cross-sectional and 124 nursing staffs were screened by the questionnaires which include the variables of the demographic data, stressor, work situation, and sleep condition. The job stress is screened by the Chinese Version of the Job Content Questionnaire. The subjects were classified into insomnia by the Chinese-version of the Athens Insomnia Scale- eight questions (CAIS-8) with the impairment of mood or daily activity.
Results：37.9 ％ of the nursing staffs met the criteria of insomnia. The significant associated factors of the insomnia by logistic regression were having the problem in couple issue（OR=3.96）, the work years at the hospital (OR＝1.22) , having methods to relieve the tension (OR ＝0.21), the decision authority（OR=0.88）for increasing one score of the item, and the psychological demands （OR=1.14）for increasing one score of the item.
Discussion：The response rate of this study is 83.8％, so the data is representative for study target. The different kinds of stress management program may provide to the nursing staffs in high risk of insomnia, such as who have do not know how to relief tension, or deal with their couple relationship, or cope stress in work. The risk of insomnia increases with the work years at hospital. The speculation is that the senior nurses have more duty other than take care patients, such as playing a role in the administration, teaching and study, so they feel more stressful than the junior ones.

SP-134

Accumulated Copper and Zinc in Lettuce Plantation in Soil Amended with Bottom Ash Ratios

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This study was conducted to determine copper and zinc accumulation in lettuce planted in sida soil amended with lignite bottom ash under laboratory conditions. Nitrogen, phosphorus and potassium in sida soil, bottom ash and sida soil added with bottom ash, and the lettuce yield were also investigated. Five ratios of sida soil added with bottom ash were tested. One-way ANOVA and LSD were used for the data analyses.
Results indicated that mixed sample ratio 0.6:0.4 had the highest copper and zinc accumulation (26.13±2.30 and 137.74±4.13 mg/kg). Copper and zinc accumulation in mixed sample ratio showed significant difference as bottom ash ratio increased ($p<0.05$). The highest copper and zinc accumulation was found at ratio of 0.6:0.4 in lettuce root (21.46±5.90 mg/kg and 113.47±4.13 mg/kg), followed by lettuce leaf (8.18±1.20 mg/kg and 32.94±7.34 mg/kg). The accumulation in root and leaf of lettuce was significantly different as bottom ash ratio increased ($p<0.05$). The highest lettuce yield was found at both ratio of 0.8:0.2 and 0.6:0.4 with 1.43±0.06 and 1.43±0.03 gm/plant, respectively. A significant difference in lettuce yield with the increase of bottom ash ratio was observed ($p<0.05$).
The results suggest that lettuce leaf at all ratios are not harmful for consumers. The lettuce leaf at all mixed sample ratios did not exceed the heavy metal contamination according to the Criteria of Food and Drug Administration.

SP-135

Correlates of Occupational Stress among Operational Staff Employees in Domestic Commercial Banks in A District of Sri-Lanka

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Objective: To describe the correlates of occupational stress in operational staff employees of domestic commercial banks in the Colombo district.
Methodology: A cross-sectional descriptive survey was conducted among 733 operational staff employees in branches of commercial banks in Colombo district, proportionate to size of the operational staff strength, using cluster sampling technique. Validated, self-administered 22-item Sinhalese version of the Job Content Questionnaire assessed occupational stress categorized as high job strain and iso-strain according to demand-control-support model. Correlates were assessed using a 20-item self-administered questionnaire.
Results: Multivariate analysis showed that perceived anger due to work-related problems at home (OR=1.8;95%CI 1.2-2.7), job insecurity (OR=2.0;95%CI 1.3-3.1), lack of opportunities for promotions (OR=1.9;95%CI 1.2-2.9), job dissatisfaction (OR=1.6;95%CI 1.03-2.5), inability to cope with work stress (OR=2.0;95%CI 1.4-3.0), delays in data processing (OR=1.5;95%CI 1.002-2.1), age <35 years (OR=1.9; 95%CI 1.2-3.3) and marital status being unmarried, divorced or separated (OR=1.5; 95%CI 1.003-2.3) showed significant associations with high job strain ($p<0.05$).
Perceived anger due to work related problems at home (OR=1.8; 95%CI 1.1-2.9), perceived job insecurity (OR=2.7; 95%CI 1.65-4.4), perceived lack of opportunities for promotions (OR=3.5; 95%CI 1.95-6.2), perceived job dissatisfaction (OR=1.89; 95%CI 1.1-3.3),

perceived inability of coping work stress (OR=3.0; 95%CI 1.8-4.9), and service in the present bank ≤ 10 years (OR=2.5; 95%CI 1.48-4.2) showed significant associations with iso-strain (p<0.05).
Conclusions: Career development correlates showed significant associations with high job strain as well as iso-strain among operational staff employees in the banks.

SP-136

Prevalence of Occupational Stress in Selected Categories of Employees in Domestic Commercial Banks in a District of Sri-Lanka

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Objective: To describe the prevalence of occupational stress among middle level managers and operational staff employees of domestic commercial banks in Colombo district.
Methodology: Two cross-sectional descriptive surveys were conducted among 353 middle level managers and 733 operational staff employees seperately in branches of domestic commercial banks in Colombo district, proportionate to size of the staff strength, using cluster sampling. The validated, self-administered 22-item Job Content Questionnaire, assessed the prevalence of iso-strain and high job strain according to demand-control-support model.
Results: The prevalence of high job strain among operational staff employees was 24.4% (95%CI 21.5-27.3); [n=179] and it was significantly higher (p=0.01) than the prevalence of high job strain among middle level managers 17.8% (95%CI 15.1-20.5); [n=63].
The prevalence of iso-strain among operational staff employees was 14.5% (95%CI 12.1-16.9); [n=106] and it too was significantly higher (p=0.04) than the prevalence of iso-strain among middle level managers 10.2% (95%CI 8.1-12.3); [n=36].
High job strain among male and female middle level managers was 18.3% (95%CI 15.6-21.0); [n=40] and 17.2% (95%CI 14.5-19.9); [n=23] respectively and the difference between these two percentages were not statistically significant (p>0.05). Iso-strain among male and female middle level managers was 10.5% (95%CI 8.3-12.7); [n=23] and 9.7% (95%CI 7.6-11.6); [n=13] while the difference was not significant (p>0.05).
High job strain among male operational staff was 26.7% (95%CI 23.7-29.7); [n=92] and it was significantly higher (p=0.04) than the females 22.4% (95%CI 19.6-25.2); [n=87]. Iso-strain among male and female operational staff was 15.4% (95%CI 13.0-17.8);[n=53] and 13.6% (95%CI 11.3-15.9); [n=53] and the difference between the two percentages were not statistically significant (p>0.05).
Conclusion: Operational staff employees perceived higher job strain as well as iso-strain than middle level managers in banks.

SP-137

Assessment of Usage and Disposal of Diapers among Caretakers of Children Under Two Years in Bangkok, Thailand

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This cross sectional study aimed to assess usage and disposal of diapers among caretakers of children in Bangkok, Thailand. The study was conducted in some communities in Bangkok from 30th January to 20th February, 2009 by accidental sampling. A total of 200 caretakers of children were interviewed. The findings of the study indicated that the respondents with good practice in diaper usage and disposal were 79.5% and 76.5% respectively. Approximately 73% of them were using disposable diapers and convenience was the main reason to use diapers. Only 10% of them had good level of knowledge on usage and disposal of diapers but only 6% of them had negative attitude towards diaper usage and disposal of diapers. Age of the respondents and age of the child were significantly associated with diaper use with p-value of 0.005 and 0.015 respectively. Sex of the respondents was associated with disposal of diaper (p-value=0.031). Attitude towards diaper disposal was associated with disposal of diapers (p-value = 0.009) while not associated with diaper usage. In conclusion, behavior change interventions to improve knowledge and attitude towards the diaper usage and disposal should be promoted among care takers.

SP-139

Plum Bum Level in the Air, Blood and Haemoglobin Level of Market Sellers in Ambon

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Market sellers who work in the streets have a big risk being exposed to plum bum. Plum bum in blood was influenced by plum bum level in the air, age, how long they work in the market, term of selling and smoking habit. The study objective was to analyze plum bum level in the air, blood and its effect to Hemoglobin level in market sellers in Ambon. Methods This research used a cross sectional design. Results There was a mean difference level of plum bum in the air at areas with many vehicles compared to areas with not so many vehicles. In addition, there was a mean difference of plum bum in the blood of market sellers in the area with many vehicles compared to area with not so many vehicles. There was also a mean difference of hemoglobin level in blood of market sellers in area with many vehicles. Level of plum bum in the air, how long

they work in the market, term of working and smoking habit influenced to plum bum level in the blood, but the most influence based on logistic regression is how long they work (p= 0.033). Conclusion We conclude that plum bum level in air and blood is higher in market seller in the areas with many vehicles and how long they work contribute the most.

SP-140

Skin Lead Contamination of Family Members of Boat-Caulkers in Southern Thailand

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Wooden-boat building and repair involves the use of powdered lead oxide (Pb3O4, or red lead) as one of the materials used in caulking. This study compared skin lead contamination of family members of boat-caulkers and control homes. It also examined the relationship of family member skin lead with floor lead loading and with dust lead content. Floor lead loading and dust lead content were measured in 67 caulkers' houses and 46 neighbourhood houses with no known lead exposure. In each selected household, wipe specimens of hand lead and foot lead were obtained from one selected family member. Hand lead loading and foot lead loading were significantly higher in family members of caulkers than controls (median 73.4 vs. 32.7 µg m-2; p=0.002 and 84.9 vs 43.4 µg m-2; p=0.002, respectively). This pattern mirrored floor lead loading and dust lead content, which were also higher in caulkers' than in control houses (median 121.2 vs. 43.5 µg m-2; p<0.001, respectively. Multiple linear regression modelling revealed floor lead loading to be a better predictor than dust lead content for hand lead loading in all age groups and for foot lead loading in adult family members. In conclusion, skin lead levels are elevated in family members living in a lead-exposed worker's house and are correlated with the levels of household lead contamination.

SP-141

Comparison between Resident Handling and Workers' Health from Long Term Care Facilities in Central Taiwan

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Objectives: One of the major occupational injuries in LTC facility is the frequent heavy handling and repositioning of residents that exceed the handling capacity of most nurses, nursing aides and orderlies. The purpose of this study is to identify the physically demanding duty for resident handling and movement, and to assess the self-reported occupational injuries among the workers as well as to explore their associations.
Methods: A cross-sectional questionnaire survey was conducted for nurse aides with participants of 204 (response rate 69.7%) from 7 LTC facilities in central Taiwan. The measurement tool contains 4 issues including personal information, resident handling and movement works, physical demanding works and self-reported health.
Results: It was found that transferring residents from chair to bed or bed to chair is the most physically demanding duties for resident handling. The most experience of self-reported injuries is the pain in the neck and shoulder. It is interesting to found that worker's injuries are correlated with the personal characteristics of age, education, number of resident care per day, license the self-reported health status. The most self-reported health problem is found in the item of headache, which includes the variables of age, education, heavy objects movement other than resident handling, license and work shift.
Conclusion: It has demonstrated that the physical demanding works are correlated with the self-reported health status. It has advocated for replacing resident handling and properly releasing workload of nurse aides in order to prevent their injuries.

SP-142

The Relationship between Neighborhood Petrol Station Density and Fetal Cord Blood Manganese in Taiwan

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Methylcyclopentadienyl manganese tricarbonyl (MMT) is widely used as substitute for lead containing anti-knocking additives in gasoline. This study was set to investigate the relationship between the concentration of manganese in cord blood and the density of petrol stations in the neighborhood as a surrogate of traffic density.
Materials and methods: In total, 1526 newborns were sampled by stratum from April, 2004 to July, 2005. Questionnaires were completed by mothers after delivery, which included demographic characteristics, medical history, and living environment. Cord blood samples were collected at birth and analyzed by inductively coupled plasma mass spectrometry. We used petrol station count (PSC) within 3 km buffer zone of the newborns' residence as surrogate for exposure to MMT-containing gasoline, based on 1343 geocoded addresses using the ArcView geographic information system. We correlated cord blood manganese and lead

concentrations with PSC using multiple regression model (SAS 9.1).
Results : The means of cord blood lead and manganese concentration were 14.3 and 49.9 μg/L respectively. Cord blood manganese concentration was significantly associated with PSC (β=0.25; p<0.0001) after adjusting for family income, maternal education, maternal smoking, alcohol drinking during pregnancy, maternal age, child gender, gestational age. No association was found between lead and PSC.
Conclusion: This ecological study found that fetal cord blood concentration was related to neighborhood petrol station density. This finding suggested that exposure to MMT-containing gasoline might have lead to fetal exposure to manganese.

SP-143

Analizing the Factors That Are Related to the Occupational Stress among Nurses within the Overnight Hospitalization Unit of Dr. Tadjuddin Chalid Hospital Makassar 2009

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Objective: WHO stated that stress was an epidemic that was spreading around the world. Based on the results of a survey carried out by PPNI, around 50,9% of nurses in 4 provinces in Indonesia experience occupational stress, the symptoms such as dizziness, tiredness, difficulties in taking a rest which are caused by a large work load, time-consuming jobs, without any sufficient incentive. . The aim of this research is to analyze the relationship among occupational stress with work load, work shift, and type of personality of the workers. The samples of this study are 63 nurses in Dr. Tadjuddin Chalid Hospital, Makassar.
Method: This research uses the method analytical survey with a cross sectional approaching
Result: The result of this study reveals that based on chi square test and creames V test with prosperity level $p \leq 0,05$, variable work load ($p = 0,019$ and $\varphi = 0,355$), work shift ($p = 0,029$ dan $\varphi = 0,334$) are related to occupational stress. On the other hand, work relationship ($p = 0,188$) and type of personality ($p = 0,142$) are not associated with occupational stress.
Conclusion: There is a significant relationship among occupational stress, work shift, and work load. The researchers hope that the involved hospitals carry out the stress management techniques, manage the physical facilities in work areas, and provide workers with entertainment.

SP-144

Concentrations of Phthalates in Cup Water at Various Thermal Conditions

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Phthalate esters are commonly used for plasticizing in most plastic products, and some of them have been found to be harmful as environmental hormone. To determine how many phthalate esters could be dissolved in sealed plastic cup water in various thermal conditions, we conducted a factorial experiment model using split-plot design. The settings of the experiment were three temperatures (room temperature, 60 °C, 80 °C) and three baking times (2 hours, 4 hours, 8 hours) with three replications. Each water samples was extracted with n-hexane and concentrated to a volume of 0.5 ml for analysis of gas chromatography-mass spectrometry. The preliminary results showed that cup water contained micro amounts of phthalates, such as diethyl phthalate (DEP) and dibutyl phthalate (DBP); the amounts of phthalates, however, increased significantly after the cup water was placed at high temperatures during a certain period of time. Based on the precautionary principles, we suggest that cup water should be placed away from any sources of heat (e.g., sunlight) to reduce the intake of phthalates.

SP-145

The Study of Foundry's Crystalline Free Silica Exposure By Xrd

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Exposure to crystalline free silica for a long term may damage human respiratory system seriously. Foundry is the basal industry in Taiwan, the dust containing crystalline free silica is produced in the working environment. Environmental monitoring of crystalline free silica is very difficult, due to the analysis is not only complicated but also costly. The main purpose of this project is to explore an inexpernsive alternative analysis with simpler process. First of all, we used the cyclone to test the usability and the uniformity. Second, we tested and took the method of Japanese JIS A1481 X-ray diffractometry. Third, we used the simple resources to build the calibration curve. Finally, we applied this method in the working environment and took this method. The results showed that the aluminum plated had a much better effect in identifying crystalline free silica. The all open-faced samples had good uniformity in the filter no matter how many middle. The calibration curve had a good correlation coefficient (r=0.995). Due to different industrial operating patterns, the industrial environment had the different concentration distribution. The dust consisted of 10- 30% of crystalline free silica in all samples obtained from the foundry environment. The crystalline free silica was accounted for less than 10% in the respirable dust. This simple and low cost method can become to improve the foundry working environment.

SP-146

Study of Employee's Lung Capacity in Cement Production Department of PT. Semen Tonasa Pangkep 2008

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Objective: Lung capacity is the amount of oxygen which is maximally inhaled into the whole body or lungs. Factors that affect lung capacity are age, work period, smoking habit, and exercising habit. The aim of this research is to depict employees' lung capacity in Production Department of PT. Semen Tonasa Pangkep in 2008.
Method: The research uses the method of observation with descriptive approaching
Results: The results show that based on age, the abnormal lung capacity is found mostly in young age, which is 61.1%.Secondly,the abnormal lung capacity is found mostly in people who have been working for 5 years or more, which is 57.9%. The abnormal lung capacity is found mostly in people who are categorized as mild (10 cigarettes/day) or non smokers, which is determined to be 57.1%. The workers who have an abormal lung capacity are the ones whom excercise in a regular basis (thrice a week for 20-30 minutes), which is found to be 58.3%. The abnormal lung capacity is mostly found in people who do not put on masks properly while working, which is found to be 55.0%.
Conclusions: Workers with younger age, longer work period, mild smokers, and mistaking in using masks, and whom take a routine excercise mostly have an abnormal lung capacity. It is advised that the involved company encourage its workers to avoid the smoking habit and are recommended to use masks as self-protection equipment properly and the appliance of rules that bring about the usage of masks while working.

SP-147

Increased Kidney and Heart Disease Mortalities in 6-28 Years Follow-Up of the Taiwanese People Highly Exposed to Polychlorinated Biphenyls and Dibenzofurans (PCBS/PCDFS)

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Background: In 1979, approximately 2000 victims in central Taiwan accidentally ingested rice oil, which was contaminated with polychlorinated biphenyls/dibenzofurans (PCBs/PCDFs).
A follow-up study allowed for the comparison of 22-year (from 1985-2007) overall and disease-specific mortality between the Yucheng subjects (oil-disease in Chinese) and their neighborhood referents in Taiwan.
Methods: Overall and disease-specific mortality (classified by ICD-9 codes) was compared between Yucheng subjects and their neighborhood controls matched for sex and age (Yucheng:neighborhood controls=1:2.8). indirect standardized mortality ratios (indirect-SMR) were calculated utilizing the Yucheng subjects' neighborhood controls as reference group.
Results: Mortalities of digestive system and genitourinary system was increased in the Yucheng men, but not in women.
To be more precise, "nephritis, nephrotic syndrome and nephrosis" (ICD=580-589) were increased in Yucheng men. "Other forms of heart disease" (ICD=420-429) were increased in all Yucheng subjects, but not significantly so in either gender. Mortalities of "malignant neoplasm of lymphatic and haematopoietic tissue" (ICD=200-208) were borderlinely increased, (SMR=2.9, 95% confidence interval=0.9-6.8). Systemic lupus erythematosus (SLE) in females was highly increased.
Conclusions: Compare with the previously study in Yucheng people as compared to Taiwan population, this study found similar results in increased SLE and digestive system mortalities.
This study also found increased mortality due to heart and kidney diseases.

SP-148

Occurrence of Endocrine Disrupting Chemicals in Taichung Domestic Wastewater Treatment Plant, Taiwan

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Nonylphenol (NP) in non-ion surfactant and phthalate acid ester (PAE) plasticizers such as DEP, DBP, BBP, DEHP are endocrine disrupting chemicals (EDCs) in environment of concern. We conducted a study to measure NP and PAEs at a domestic wastewater treatment plant (WWTP) in Taichung city. Samples of raw wastewater and sludge were collected at the WWTP, extracted using HCL hydrolyzing method, and NP and PAEs were measured using HPLC. The results revealed that NP was detected in all samples, and PAEs like DBP and DEHP levels were higher in sludge than in influent. NP concentrations in influent ranged 4.2~16.2 mg/L, while concentrations DBP were greater than 0.2 mg/L. PAEs levels, higher in influent than in effluent. NP concentrations increased in effluent. This study showed that NP, DBP and DEHP are lipophilic chemicals which can be detected easily in sludge compared with wastewater. High concentration of these two groups of EDCs were discharged from the WWTP.

SP-149

Urinary and Fingernail Metal Concentrations in a Population Exposed to Airborne Pm2.5

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Recent studies have provided increasing evidence that lung cancer incidence is associated with exposure to airborne particulate matters of less than 2.5μm in diameter (PM2.5). The mutagenic compounds, among them the carcinogenic metals, may play very important roles in carcinogenesis in lung. Urinary and fingernail metals are biological indices of metal exposure. In this work, we examined the metal content of nail and urine samples from traffic agents and compared the metal levels with metal composition of the airborne PM2.5 to which these traffic agents were exposed. Ambient PM2.5 samples were collected with personal air samplers while the agents were on duty and the metal content was determined by ICP-MS method. We also supplemented the study with a complete health check, and questionnaire about life style and medical history.
Results: We have recruited 29 traffic agents in Hsinchu area to participate in the study. They were exposed to an ambient air with PM2.5 concentration of 39.5 to 244.8μg/m3. Urinary arsenic and lead concentrations were higher in subjects with abnormal triglyceride level; cadmium and nickel concentrations were higher in subjects with abnormal AST levels. Airborne PM2.5 As concentration was correlated to urinary As concentration (Pearson 0.424, $p<0.05$). Two subjects were diagnosed with lung pulmonary fibrosis through chest X-ray (n=25, 8%).

SP-150

Modification Genes for CYP1A2 Inducibility among People Exposed to Polychlorinated Biphenyls(PCBS) and Dibenzofurans(PCDFS)

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Background: Approximately 2000 people were exposed to rice oil contaminated with PCBs and their heat-degradation products, mainly PCDFs in central Taiwan in 1979. CYP1A2 activity was found to be induced by such exposure in exposed individuals. The aryl hydrocarbon receptor (AhR) pathway was known to be critical in mediating such enzyme induction. AhR nuclear translocator (ARNT) and AhR repressor (AhRR) played important roles in transcriptional regulation of AhR.
Objective: To determine whether the ARNT and AhRR polymorphisms are associated with individual inducibility of CYP1A2.
Method: Among the people exposed to PCBs/PCDFs and their community controls, 173 previously participated in a study on CYP1A2 activity as measured by caffeine metabolic rate, which was in turn found to be positively associated with serum 2,3,7,8-TCDD toxic equivalency (TEQ). Genotyping was done for the following SNPs：AhRR:(rs2292596)(C/G), ARNT:rs7517566(A/G),rs3820541(C/G),rs3768016(C/T), and rs2228099(C/G).
Result & Conclusion: At a similar TEQ dose range, those subjects with AhRR GG genotype had the highest induced CYP1A2 activity, ;Those with CC genotypes had lowest inducibility ($p<0.05$). ARNT(rs3768016) CC genotype had highest inducibility, followed by CT and TT genotypes. ARNT (rs2228099) GG genotype had highest inducibility, followed by CG and CC genotypes. We conclude that AhRR and ARNT genotypes might interact with PCBs/PCDFs in cytochrome P450 enzyme induction effects.

SP-151

Exposure Monitoring on Respiratory and Dermal Routes and Biological Monitoring of Para-Dichlorobezene in Repellent Workplace

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Objective: To explore the relationship between ambient and dermal exposure p-DCB concentrations. In addition, to explore whether the accumulation of the urinary 2,5-DCP existed or not, and to determine the metabolic kinetic parameters of urinary 2,5-DCP.
Method: 16 p-DCB-exposed workers were selected to monitor their ambient p-DCB exposure levels, skins exposure dose, and urinary 2,5-DCP levels at both pre-shift and post-shift during 3 consecutive day. Eight p-DCB processing workers were chosen to monitor 24-hour urinary metabolites of p-DCB for set up the metabolic kinetic parameters.
Result: The geometric mean and standard deviation of ambient p-DCB concentrations were 15.1±1.37 ppm. The geometric mean and standard deviation of skin exposure levels of p-DCB were 5.65±2.35 μg/cm2 and the highest level was found in palm, neck was the lowest. The geometric mean and standard deviation of differential values of pre- and post urinary p-DCB and 2,5-DCP were 0.45±8.49 及 1.75±3.65 μg/L respectively, and only showed significant correlation with skin exposure levels of p-DCB. The statistical data of three-days urinary p-DCB levels showed that the urinary p-DCB were not accumulated, but the urinary 2,5-DCP levels significantly raised with the sampling time. The half life of urinary 2,5-DCP was estimated as 4 hours. According the walk-through records of the plant, the personal protective measures were suggested to effectively reduce the exposure of p-DCB.

SP-152

Occupational Herniated Intervertebral Disc (HIVD) in Taiwan-Physical, Occupational and Genetic Interaction

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Background: Herniated intervertebral disc (HIVD) is listed as an occupational disease in Taiwan's workers' compensation system. Known occupational risk factors include heavy lifting, whole body vibration, awkward posture and heavy physical activities. Nevertheless, the contribution of personal factors, e.g. genetic factor, is considered as an important role of causing HIVD in recent studies.
Purpose: We recruited highly weight-lifting exposed fruit wholesaling workers to determine the roles of genetic susceptibility in especially highly exposed workers.
Study Design: For a higher exposed population, total of 112 workers working for more than 2 years in the fruit market were invited in this cross-sectional study. Every participant was assessed with questionnaire, MRI and BMD assessment, blood testing and genomic analysis, photographs taken of simulated working posture and lumbar load estimation.
Result: We found that cumulative lift load was associated with risk of HIVD .Among those highly exposed to lifting , i.e., log10(lift load)>6.5, COL9A2 carrying a Trp allele was a susceptibility factor for women to have HIVD. In male fruit workers, such susceptibility factor was not witnessed. It could be due to high lifting load resulting in undifferential damage to the intervertebral discs among male fruit workers.
Conclusion: COL9A2 with any Trp allele seemed to interact with lift load and played susceptibility factor among workers exposed to weight-lifting.

SP-153

A Study on the Relationship among Work Characteristics, Working Pressure and Health-Related Quality of Life (SF-36 Scale) of Psychiatric Nurses- The Influence on Hospital Moderating Effects

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Objective: The purpose of this study is to investigate the relationship among job characteristic, working pressure (effort-reward imbalance model (ERI)) and health-related quality of life (SF-36) in psychiatric nurses. Furthermore, it also examines the cross level influence between group and individual level.
Methods: Hierarchical Linear Modeling analysis hospital variables for the hypotheses in a sample of 852 psychiatric nurses and 39 general and psychiatric hospitals.
Results: The results showed that subjects' ERI and over-commitment (OVC) showed significant negative correlation with health-related quality of life variables. And subjects' general health (GH) in psychiatric hospital was significantly superior to subjects in the psychiatric department in general hospital. And, subjects' mental health (MH) in public hospital is also significantly superior to subjects in non-public hospitals. Moreover, in the interaction of HLM, only hospital categories have moderating effects. It means that different hospital categories (psychiatric hospitals and psychiatric department in general hospitals) moderate the relationship between ERI and health-related quality of life variables.
Conclusions: When psychiatric nurses suffer from the problems of ERI and OVC in working environment, their health condition tends to get worse. However, the GH of subjects who work in psychiatric hospitals is better than those who work in the psychiatric department in general hospitals. Moreover, the MH of subjects working in public hospitals is also better than those who work in non-public hospitals. Furthermore, the negative influences between ERI and health-related quality of life was stronger when psychiatric nurses who work in psychiatric department in general hospitals.

SP-154

Exploring the Relationship among Demographic Factors, Job Factors, Job Perception, Other Job Opportunities and Turnover Intention of Nursing Staffs

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Objectives: To explore: 1. attitudes of nursing staffs toward job perception and turnover intention; 2. the relationship among demographic factors, job factors, job perception, other job opportunities and turnover intention.
Methods: Nursing staffs of regional, district hospitals and clinics were enrolled in the survey, in which 1,767 self-administered questionnaires had been collected, with a response rate of 64.84%. The data was analyzed by structural equation modeling, with confirmatory factor analysis and path analysis to explore the relationship among above factors.
Results: 1. Nursing staffs have a lower level of job perception and a higher level of turnover intention. 2. Job perception is a significant and negative predictor of turnover intention (coefficient β: -0.328); Other job opportunities is a significant and positive predictor of turnover intention (coefficient β: 0.310). Among all demographic and job factors, nursing staffs with a higher education level, with a formal job, and with a daytime work (instead of a night-shift work) grossly have a lower level of turnover intention. Nursing staffs who are rookies in the nursing profession have a higher level of turnover intention.
Conclusions: The mechanism for turnover intention of nursing staffs is multi-factorial and also multi-level.

Nursing staffs with a lower job perception and a higher opportunity of other job have a higher turnover intention. Turnover of nursing staffs is an important issue to the management of health care organizations. This study may serve as a reference and utility for nursing staffs and medical managers who focus on researching or solving this problem.

SP-155

In-Flight Medical Emergencies and Public Safety in Hong Kong Commercial Aviation

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Background: With increasing globalization, commercial air travel has become more accessible. More passengers present with in-flight medical problems, and critical illness may lead to aircraft diversions or in-flight death. The study objective was to examine the predictors of medical diversions and in-flight deaths among passengers who present with in-flight medical problems.
Methods: Retrospective cohort study of in-flight medical problems for a large commercial airline based in Hong Kong. All passengers with in-flight medical problems for whom emergency medical advice (MedLink) was sought from December 2003 to November 2008 were studied. For each passenger set variables were collected, and those with recorded outcomes of diversion and death were identified. The variables associated with diversion and death were identified using t-tests, the chi square tests and logistic regression analysis.
Results: There were 4068 medical emergencies with 46 diversions and 30 deaths in the five year study period. Increasing age, altered mental status and the use of an automated external defibrillator (AED) were significant risk factors for both diversions and deaths. For passengers aged 81-90 years who presented with medical problems, the odds ratio for diversion increased to 15.2 compared to 11-20 year olds. Passengers who were unconscious were 33.4 times more likely to require diversion and 234 times more likely to die.
Conclusions: Public awareness of potential medical risks during flights and prescreening of passengers are important in preventing in-flight medical emergencies. Improvements in the reporting system are necessary to improve our understanding of in-flight medical emergencies.

SP-156

Self Efficacy & Sociocultural Factors: Impact on Condom Practices & Condom Programming

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Malaysian married men's low condom use, at 6.9%, is a serious challenge to its national efforts to halt rising HIV/AIDS. Individual and sociocultural factors impact on condom practices. A mixed methods study of 240 urban respondents (68% male, 32% female) was conducted to assess condom practices and barriers (individual and sociocultural factors) through survey and 6 Focus Group Discussion (FGD). 40% of the sexually active respondents ever used condoms and 33% never used. Majority did not use condoms at first sexual intercourse, or with primary partners. Self efficacy barriers included low confidence in condom use, condoms tearing, semen spillage, and interrupted choreography of condom use. Other individual factors were decrease in sexual pleasure, "lazy" to use condoms and embarrassment when buying condoms. However, FGD findings revealed sociocultural factors underlying self efficacy/individual barriers: men's culture of resistance to condom use based on male privilege to sexual pleasure; male anxiety about interruptions, fear of losing erection and failure to ejaculate based on norms of masculinity and sexual prowess. Cultural inhibitions and non-acceptance of sex among the young, unmarried, and of diverse sexual orientations explain men's embarrassment in buying condoms. The complex interrelationship between self efficacy/individual barriers and sociocultural factors call for comprehensive condom programming and promotion. It should incorporate strategies that desensitize the condom, behavioral change communication, improved access and availability of condoms; and targeting masculinity and condom resistance through promotion of gender equality and male responsibility towards safe sex.

SP-157

Breast Health Awareness and Practice of Breast Self Examination (BSE) among Female Adults in Malaysia

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Breast cancer is the most common cancer amongst Malaysian women. It is known that knowledge and self awareness about early detection of breast cancer could encourage women to carry out Breast self examination (BSE). Thus, the objective of this study is to document the levels of knowledge, attitudes and practice of BSE among rural women in the state of Pahang, Malaysia.
Methodology: A cross-sectional study was conducted among 1079 females aged between 20 and 60 years that were selected from five districts by random sampling to represent the population of Pahang, Malaysia. Results: Generally, there was a very high degree of awareness among the females in all the districts. About half (53.3%) of the information regarding breast cancer were obtained directly from the healthcare sector, while mass media contributed only 32.3% in providing awareness of breast cancer. It is encouraging to note that more than 62.6% had ever practiced BSE and more than 60% of those who do BSE practiced it once a month. Self awareness of breast cancer was reported to be the main factor (74.1%) that encouraged the females to practice BSE.Out of the

10% of the females that had ever detected any lumps in their breast, 77.8% of them had sought professional help. Conclusion: The practice of breast self examination among adult females in Malaysia depends much on the various socio-demographic characteristics especially the level of education and exposure to the knowledge of breast cancer.

SP-158

The Measure of Continuity of Care- Analysis and Application

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Objectives: 1. To seek for a suitable measure of "Continuity of Care"(COC) for Taiwan. 2. To apply the suitable measure to examine the relationship between COC and care outcome. Methods: We designed a questionnaire of COC measures assessment and sent out to 21 professors/doctors who were familiar with the research issue or healthcare quality. The data of association analysis came from National Health Insurance research database. Logistic Regression and Negative Binomial Regression were used to examine the relationship between COC and hospitalization and emergency department visit.
Results: According to the descriptive analysis of the questionnaire, there was no consensus about the best COC measure in Taiwan. However, among the COC measures based on claims data, COCI was the most stable indicator when taking the number of ambulatory visits into account. COCI and MMCI were used as COC indicators in the regression models. The analysis was carried-out by two separate subsamples: patients with non-chronic disease related visits (n=49803) and with chronic disease related visits (n=14172). Results from the regression models showed that people with high COC had lower likelihood and fewer number of utilization in hospitalization and emergency department visit for patients in both sub-sample.
Conclusions: There is no consensus on what kind of COC measure is the most suitable for Taiwan. Nevertheless, we suggest that COCI is good for researchers in Taiwan. Furthermore, this study also supports that higher COC is associated with lower risk and frequency in both hospitalization and emergency department visit.

SP-159

Effect of Fish Concentrate Capsule on Post-Op Patients at orthopedic Division, Wahidin Sudirohusodo Hospital, Makassar, Indonesia

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A kind of fish called snakeheads contents higher albumin than other fishes. The study was to assess effect of fish concentrate capsule on albumin serum, nutrition intake, mid upper-arm circumference (MUAC), and wound healing process. This was a quasi experiment pre-post test with control. The subject were post-op patients with open healing that divided into two groups(n=13 each), intervention group (IG) who received fish capsule and diet high calorie protein program from hospital, while the control group (CG) just obtained diet high calorie protein program. Measurements were conducted before and after ten days intervention including albumin, nutrient intake and MUAC. Data was analyzed using paired and independent t-test. The study showed that there was a significant different before and after at IG of albumin serum, intake of energy, protein, lipid, carbohydrate and zinc (p 0.05). On the other hand, there was not a significant different in CG on albumin serum and nutrient intake (p >0.05), except to MUAC (p < 0.05). By using, wound healing indicator, there was 4 days faster in intervention compared to control groups. Different changes between intervention and control groups for albumin, intake energy, protein, lipid, carbohydrate and zinc were 0.7g/dl, 654kcal, 25.2g, 22.8g, 89.5g, and 2.7mg respectively. We conclude that providing fish (snakeheads) capsules for ten days to post-op patients can increase albumin, nutrition intakes and wound healing.

SP-160

Impacts of a Government Social Franchise Model on Service Utilization and Client Satisfaction at Commune Health Stations in Vietnam

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While franchising private RHFP services has been found to improve service quality and utilization in developing contexts, there is very little evidence to demonstrate that franchising RHFP services improves service utilization in the public health clinics. This evaluation study assesses the impact of a social franchise model of reproductive health and family planning services tested first time in the public communal health stations (CHSs) in two provinces of Da Nang and Khanh Hoa in central Vietnam. Data collected from CHSs' client visit counts and surveys of 1181 users and would-be users in the communities conducted at baseline, six months, and 12 months following the full implementation of the model. Data on client visit counts indicate that franchise membership is significantly associated with an additional 51% reproductive health clients, 40% general clients, and 45% family planning clients. Client survey found a positive association between franchise membership with community perceptions of service quality, client satisfaction, and their likeliness to return and recommend others to low cost, community-based reproductive health and family planning services provided at the local CHS. This positive finding suggests that the integration of franchising into provision of reproductive health services

at the CHS level offers an opportunity for a feasible and sustainable business model in primary public health care in Vietnam.

SP-161

PHC or PHC: The Rural Communities' Needs for Health Care

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Background: Primary Health care (PHC) in more deprived areas or in rural communities seems to be being changed to another PHC-Priorities in Health Care.
Objective: to assess the priority health needs of the rural Qazvin to design interventional community based research to solve their problems.
Methods: Both quantitative and qualitative methods were applied. A random sample of 500 rural households were selected and the heads of the families were interviewed through structured questionnaire. Besides, focused group discussion and deep interviews with the people, GOs, NGOs and the informant persons were organized.
Findings: About 95% of the target population are under coverage of primary health network of the government and their health needs are changing from basic needs such as immunization, sanitary water, infectious disease control, family planning, mother and child care towards more complicated or sophisticated needs. For example, nutrition and cooking habits are changing to the urban patterns, their environments are polluted with deterioratable material, persistent pollutants, non-communicable diseases are going to be more prevalent, aged problems are increasing, their psycho-social needs are growing towards semi-urbanized societies, the drug abuse and smoking is going to be common among the young etc. They refer to public or private medical centers to get the services and the rural health centers under PHC network can not satisfy their increasing needs.
Conclusion: PHC mission in the rural communities should be revised and reoriented towards the new PHC: Priority Health Care services to respond the transitional communities' health needs.

SP-162

Perception towards Hand Washing among Caregivers in Thai Households with Influenza Infected Child, Bangkok, Thailand : A Qualitative Study

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This qualitative study aimed to describe perception towards hand washing among Thai caregivers within the context of non-pharmaceutical intervention study to reduce influenza transmission. Caregivers and confirmed influenza infected child were enrolled. The in-depth interview was conducted at each participant's house during November 2008 and May 2009. Twenty-five caregivers taking care of children's illness were interviewed. Most of them are female (24/25) with the age ranging from 22-47 years. The interviews elicited details of perception on benefits of hand washing, availability of hand washing facilities, barriers and educational approach to promote hand washing. Findings indicated that caregivers perceived that hands carry germs and transmit diseases such as diarrhea, conjunctivitis, parasitic diseases, skin infection and influenza. Hand washing reduces germs, minimize diseases-transmission and is the most economical preventive practice comparing with other preventive measures such as vaccine. Hand washing facilities include sink, running water tap, soap/detergent and towel are always available, convenient and enough for members. Barriers to adherence include being busy, in a hurry, unaware, forget and inconvenient. Participants stated that their children were unaware of benefits of hand washing; thus, ignored the practice. They also believed that community-based hand washing promotion, home-based education with written materials and individual training would be useful to modify hand washing behaviors among family members. In conclusion, caregivers revealed positive perception towards hand washing. Having caregivers to promote hand washing will be a key to successfully modifying hand washing behavior in households.

SP-163

KAP Survey on All Residents for Effective Behavior Change on Healthy Lifestyle and Healthy Diet-Community Participation Activities in Kiyokawa-Village, Japan

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Objective: To promote healthy lifestyle and healthy diet by participation of community residents, we organized KAP Survey (Knowledge, Attitude and Practice) to clarify current consciousness of residents.
Method: We classified residents into 5 age groups for survey. Recovery rates were as Infants 57%, Pupils 99%, Teenagers 53%, Adolescents 36%, and Seniors 51%. Questions were common issues of attributes, health consciousness, eating habit, food, exercise, sleep, mental health, smoking, drinking, dental health, healthy measure,, etc. sorted-out by priority of concerns of each age group. And age-group specific items. We analyzed collected data by Simple tabulation, Sex-Age tabulation and Cross analysis between all items by sex using chi-square test.
Result: Health status of "Very healthy" was 63% in infants, but it was decrease by age then it comes 10% in

seniors. As measure for health, "Sleep well" was top in infants, and "Eat breakfast everyday" was top in other ages. Subjects of "Eat breakfast everyday" were high of 95% in pupils and 96% in seniors, and relatively low of 85% in teenagers and 96% in adolescents, but these figures were higher compare to other surveys in Japan. Subjects who didn't practice exercise were highest in adolescents of 40%, and lowest in pupils of 10%. Conclusion: Results from KAP Surveys were quite suggestive for further planning for healthy lifestyle and healthy diet, for effective interventions of behavior change, based on characteristics of target groups. We are organizing working groups for planning by residents participation in FY2009. We will also report these activities.

SP-164

Food Pattern and Activity towards Central Obesity in Different Kinds of Social Economic Status

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Prevalence of obesity increases sharply in few years in the developing countries. Obesity is a risk factor of disease that to be main cause of death like coronary heart disease, diabetic mellitus, stroke, and cancers. The study was intended to assess effects of food pattern and activity on obesity in different kinds of social economic status (SES). The analysis used Riskesdas (Basic Health Research) data collected in 2007 in all provinces. Data from Java and Sulawesi's island was selected in the analyses (n=3.478). A multivariate logistic regression was performed to evaluate determinant factors towards obesity in each social economic status.
Multivariant analysis showed the most risk factors of abdominal obesity was physical activity to low and middle SES, with Exp (B) value 2,032 and 1,461, respectively, while In the the high SES, consumption of sweets had negative risk on the occurrence of central obesity, with Exp (B) 0,678.

SP-165

Rural Thai Elderly Health Status and Community Health Care Model

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These participatory action research aims to study the life styles, health status, and self-health care among elderly people who live in the semi-urban area in Chiang Rai Province, northern Thailand. The study population were the people who were of 60 years old and selected by a simple random sampling technique. Totally 212 persons were recruited in to the study from 504 persons. The instruments of the study were the questionnaires which composed the general questionnaires, WHOQOL (WHO quality of life), NRI (Nutrition Risk Index), MHSE (Mental Health Status Examination). All the questionnaires had been tested for validity and reliability. The instruments included the physical examination form, and 5 ml. of blood specimen.
The results found that 54.23% were female, 25.47% were age 70-74 years, the highest frequency of married were 3 times, 39.6% were have had the disease history, 32.07% have the history of medical operation. 100.00% presented that visited the medical doctor at the hospitals or public health centers while their illness. 86.32% living far from the hospital about 2 kilometers. 98.15% used the social welfare insurance when received health care service. 56.13% of care giver were their relative. 91.985 had income 500 baht per month, 48.58% were illiterate. 12.73% has smoked , 59.25% has 41-50 years of length of smoking, 16.98 were an often drink alcohol, and 42.10% were eat un-cook food. Biochemistry results shows that 17.55% were ≥ 251mg/dl o

SP-166

Intentional Self Poisoning in Adolescence- What Are the Reasons

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Deliberate self poisoning with pesticide, plant poisons or drug overdose is commonly seen among adolescence in developing countries. Objective of this study is to identify the reasons of self harming with poisoning. A prospective study was carried out in teaching Hospital Anuradhapura Sri Lanka over a period of 6 months. Out of 731poisoning admissions 161 were in the age group of 11-19 years. 85 patients completed the confidential semi structured questionnaire on discharge from the hospital after clinical recovery. Females showed highest incidence of deliberate poisoning than male (64:21). Organophosphate was the poison of choice.29% had the intention of suicide while six of them (7.05%) revealed previous attempts. Others intend to draw attention or punish themselves. Majority of the patients had studied beyond grade 10 at schools. 34.11% had left the school before completing the secondary education and was unemployed. But only 1.17% gave it as the reason for intentional self poisoning. For a majority conflict with parents or parents in- law was the reason (35.29%). Conflict with the spouse 11%, siblings' 14%.misunderstanding /argument with the boy friend/girlfriend accounted for 11.47% .Sexual harassments accounted 2.35%. Out of the study sample 10%of adolescent were married .Argument with either spouse or parents in-law was the reason for poisoning for all of them. Some has witnessed the intentional poisoning by their immediate family members, neighbors or classmates. Interventions to reduce the adolescent intentional self poisoning should be directed towards

building up a good relationship with them by the parents and the family members.

SP-167

Revisiting Community-Based Health Workforce from Community-Based Approach to Family-Based Approach Case of Indonesia

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This policy paper based on the data and library research to analyze Community-Based Health Workforce (CBHW). The paper explore the history and the some models of CBHW that are implemented in Indonesia. Results, the history of CBHW come from long story. In early period, we only know the CBHW as traditional healer. There is no special program was developed by government to support the community health. The health training for the TBA was started in the year 1952 by Ministry of Health (MOH). In 1986. the Integrated Health Post (IHP) was launched by President of Republic of Indonesia.In this period, many success story, the famous one is the family planning program. On 2007,MOH introduced new program that is called the Steady village. The village is description of a community who are aware and able to prevent the health problems such as malnutrition, communicable diseases. In the year 2009, the program is targeted that 69,000 villages will become the steady villages. Eventhough, the CBHW has been conducting for more than 30 years in Indonesia. It seems that works ineffectively, so we propose the Family-Base Health Action (FBHA) as new approach in conducting the public health program.Conclusions, In the future, we need a new concept of self help and self reliance community health program. The FBHA could be a solution since it focus on the family health. The FBHA base on the family member as health cadre that lead to sustainable the health program in household level

SP-168

Policy Implementation of Village Allert to Achieve Healthy Indonesia 2010

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In orderto achieve Health Development Vision called as Healthy Indonesia 2010, Government of Indonesia has launched a program called as Village Alert. The Village Allert Program is aimed at forming community at village level who are aware, willing, and able to prevent and handle various threat to public health like malnutrition, communicable diseases and diseases that has potential to be outbreak, disaster, and injuries using local resources and community mutual-partnership (gotong royong) However, this program is centrally designed by Ministry of Health and implemented by local government such as district goverment in a decentralized system. After implemented for 2 year, this program is seemingly not so successful. This article is trying to identify and discuss the causes that make this important program not successfull and define several options including policy and managerial options covering human resources and management arrangement of village allert program at village and disrict level.

SP-169

Risk Factors of Gout in Out Patients of Takalar General Hospital, South Sulawesi Province, Indonesia

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Gout arhritis or gout is a rheumatic disesase that caused by kinetic disturbance of uric acid that is hypeuricemia. The study was aimed to determine risk factors of gout in Takalar Hospital. The study was observational using case-control design. Case was gout pateints and control was patients in Internal Clinic with no gout. A logistic regression analyses was used to assess the risk factors. Results showed that there were correlations between gout and age (OR=3.59, CI-95%:1.76–7.33), gout and sex (male) (OR=2.02, CI-95%=1.05–3.86), gout and obesity (OR=2.25, CI-95%: 1.17 – 4.33), gout and hypertension (OR=2.68, CI-95%:1.32–5.44), and red-meat consumption (OR=5.66, CI-95 % 2.59–12.4) and no correlation between gout and seafood (OR=0.706, CI-95%=0.36 – 1.38) and consumption of traditional alcohol drink (OR=0.91, CI-95%=0.38 – 2.14). We conclude that the highest risk factor of gout was red-meat consumption. It is suggested that people on age more than 40 to control food that high purin content, active on sport and control of body weight and blood pressure.

SP-170

Impact of Normal Alanine Aminotransferase Levels on Incident Diabetes

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Background: Elevated ALT levels might be associated with type 2 diabetes but whether higher ALT levels within the normal range predict the risk is unknown. Methods: We followed a community-based cohort of 3,446 individuals 35 years old without diabetes and hepatitis B or C in southern Taiwan for 8 years (1997-2004) to study the risk for type 2 diabetes with different normal ALT levels.
Results: Among the 337 incident diabetes cases, 16.0% were from those with ALT levels < 10, 44.5% with ALT levels 10-19, 30.0% with ALT levels 20-39, and only 9.5% with ALT levels 40. A cumulative hazard function test showed that the higher the ALT levels, the greater the cumulative incidence rate of diabetes (P < 0.001,

log-rank test). A multiple Cox proportional hazards analysis showed that higher ALT levels, from hazard ratio (HR) = 1.8, for ALT = 10-19, HR = 3.7 for ALT = 20-39, to HR = 4.5 for ALT 40, were significant for developing diabetes (P < 0.001). The risks of higher ALT levels in the participants wihtout alcohol consumption were similar to or even higher than those in the total cohort. After adjusting for BMI levels, the HR of ALT levels was markedly higher for those with a BMI < 25 than those with a BMI 25.
Conclusions: Higher ALT levels, even within the normal range, are strong predictors of type 2 diabetes independently of BMI levels with a dose-response relationship.

SP-171

Legal Issues on Health and Public Health Servces for Algoholics

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The objective of this study was to identify the current legal issues on health and public health services for the alcoholics in Mongolia and to reflect people's opinion for the development of the legal environment. Qualitative analysis of 36 semi-structured interviews with professionals who are responsible for alcohol issues and alcoholics combined with legal document review of 24 laws and other documents. There are many references focused only on the compulsory treatment coercing individuals into alcohol abuse treatment in laws. For example, compulsory treatment and labor for alcoholics under the direction of legal enforcement through the decisions of the Court in case of refusing treatment is seen more as a punishment. Sobering-up facilities became a place of punishment to detain citizens like offenders at police office, instead of place for sobering them up from the harmful exposure to alcohol according to the Law on the compulsory sobering-up of persons who have become inebriated. Most of alcoholics and professionals had same perception that there is no treatment or training and health care service provided in the sobering up cells. In conclusions, there is as of yet very little developed regarding the environment on health care and social welfare and protection for alcoholics. Therefore, participants recommended to revise laws combating alcoholism and to improve capacity through the provision of medicine and equipment to the narcological departments of district health centers and the establishment of narcological departments with beds at the aimag hospitals for treatment and prevention of alcoholism.

SP-172

The Effect of Comparison Preventive Liver Fluke Behavior between Application Health Belief Model with Participation and Hand Book in Liver Cancer's Risk Group

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This quasi-experimental research aimed to study the effect of comparison preventive liver fluke behavior between application health belief model with participation and hand book in risk group's cancer of liver, Nonsang district, NongBuaLamPhu province. The Participants were 82 divided experimental group I and experimental group II each group were 41 subjects. The participants in experimental group I were received health education program using lecture, VCD, the participation ,the stimulation and handbook of liver fluke. The participants in experimental group II were received only handbook of liver fluke. The duration covered 12 weeks and data collection by questionnaires. The data was analyzed by the Stata version 8.2 to acquire percentage, arithmetic mean, standard deviation and median. The independent t-test was used to compare the knowledge, the perceived susceptibility, the perceived severity, the perceived benefits, the perceived barriers and the practice for modification preventive liver fluke behavior.
The result after experiment showed that the experimental group I had arithmetic mean of the knowledge, the perceived susceptibility , the perceived benefits and the practice for modification preventive liver fluke behavior were more than the experimental group II significantly (p-value<0.05) but the perceived severity and the ceived barriers nonsignificantly. The examination for parasite before experiment showed that the experimental group I and experimental group II infections liver flukes found 9.76 % and 7.32% respectively and treated praziquantel. The after experiment not found infections liver flukes. The recommended that study applied this program for modification preventive liver fluke behavior and cholangiocarcinoma long term.

SP-173

Enhancing the Utilization Rates of Preventive Healthcare Services for the New Immigrant's Children

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The objectives of this study are: (1) to understand the actual utilization rates of preventive healthcare services for the new immigrant's children, and (2) to enhance the utilization rates by implementing the intervention measures. This study targets the new immigrants living at Ji-An, Hualien County; a group of 100 are selected by purposive sampling; 50 are assigned randomly to the experimental group, and another 50 to the control group. In order to uplift the utilization rates, the social cognitive theory is applied in this study to employ the intervention

measures. It brings about how the people、environment and behavior interact with each other; meanwhile, it explores how people's thought and intervention measures affect their health behavior. Furthermore, it actually carries out the intervention program, and evaluates the result for both the experimental group and control group. The findings have three parts: the first part is the analysis of the research target (this analysis is the pretest of the intervention program), the second part is the effectiveness of the intervention program, and the third part is the doctors' suggestion for uplifting the utilization rates. The findings demonstrate that the intervention program generates statistical significance toward the "children's health check-up' and "health consultation for the children".

SP-174

Analysis and Achievement of Healthcare Station for Promoting Residents' Health in a Community of Mid-Taiwan

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Objectives: In mid-Taiwan, a community hospital established healthcare station at nearby villages since June 2007. We took residents' blood pressure (BP) weekly, finger-stick blood sugar (FBS), serial programs of patient instructions and epidemic prevention monthly to aim to investigate and analyze the efficiency of healthcare station in health promotion.
Methods: We selected one village as the sample. The population was 782, with 44% male. Statistic t-test of residents' BP and FBS of 2008 was done by SPSS 13. We followed up cases with abnormal BP and FBS, and investigated residents' satisfaction about health promotion via questionnaires.
Results: Total residents who participated actively were 46: mean age, 70±4 years; 30% male. On January 2008, the residents' mean BP was 147±7/94±5 mmHg and number of cases with abnormal BP and FBS were 30 and 12. On December 2008, mean BP was 135±5/85±3 mmHg and abnormal cases were reduced to 21 and 10. Throughout one-year of patient instructions and closely monitored, the reduction in residents' BP achieved significant difference ($p<0.05$), but no difference in FBS. The residents' satisfaction for healthcare station could attain to 90%.
Conclusions: Healthcare station's work in regular BP monitor and life style instruction got significant achievement, but the efficacy in FBS reduction could be studied further. We expect that a combination of diet modification, regular exercise and follow-up in community hospital could provide better health quality.

SP-175

"The Pills Touch My Heart"- Medication Cognition and Medication Behavior within Communities of Elderly People Suffering from Hypertension and Cardiovascular Diseases

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Objectives: Due to the fact that hypertension and cardiovascular problems are lingering diseases, elderly people tend to neglect the necessary medication. Therefore this research focuses on the medication cognition and behavior of elderly suffering from these kinds of diseases.
Methods: Our research is based on an In-depth interview with open questions. The group being questioned consists of 20 elderly people in 2 suburb communities. The group in the first community had participated in a health education program. The second one has had no health education at all, but was submitted to several preventive health examinations in the neighboring hospital.
Results: Our comparative study indicates a clear division between the two groups being questioned: The participants of first group show more awareness concerning the side effects of their prescribed medicine. They are more eager to tell the physician about their complaints connected with their medication. The second group showed the opposite behavior. These participants were not aware of the side effects and were reluctant to speak with the physician about their complaints. The statements suggest that coping with health problems is strongly interrelated with intensive neighborhood contacts within these communities consisting of elders with little education. The regular control of their blood pressure indicates that elderly with hypertension are well aware of their disease and take their medicine in accordance to the prescription. Due to their worse health condition elderly with hypertension plus heart diseases have to take a greater variety of pills. Their medication behavior can be labeled as selective.

SP-177

More Family Numbers, Higher Quality of Life? Evidence from Quality of Life of Family Numbers with Needed Long Term Care Family

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The different choice of care may be impact the caregivers' quality of life. This study aim is to analysis the number of family influence the quality of care of family caregivers. By using the 2001 Taiwan National Health Interview Survey data, we analyzed 986 samples of 372 families, and used multiple regression analysis as statistical method. After controlling other confounding factors, there is statistical significant negative effect influence of numbers of family on physical health related quality of life, and there is no significant effect on mental health related quality of life among samples. The results will be discussed.

SP-178

Investigation of Factors Associated with Influenza Vaccination among Hospital Workers

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Influenza is a highly contagious acute respiratory disease. Hospital workers not only are high risk population in terms of occupational exposure, but they, under influence of the disease, can also transmit influenza to their patients who can afterward develop complications or even die from the disease. Therefore this study was targeted at hospital workers to investigate their knowledge, attitude and behavior regarding to influenza vaccination. This was a cross-sectional study that included hospital workers from southern Taiwan. In order to include all types of hospital workers in this study, study subjects were selective purposively. A structure questionnaire was designed to collect study information. Information collected in the questionnaire included: knowledge of influenza, knowledge of influenza vaccination, attitude toward influenza vaccination, personal influenza vaccination experience and personal characteristics. Five hundred study subjects participated in this study. Data analysis utilized statistical software SPSS v. 15.0. Students't test and ANOVA analysis were performed to analyze the relation between worker's characteristics and influenza knowledge, influenza vaccination knowledge and attitude of vaccination. The results showed that influenza knowledge was related to year of work experience; experienced workers were having higher influenza knowledge scores than those who did not. Also, influenza vaccination knowledge was related to attitude of influenza vaccination; those who indicated willing to receive influenza vaccination next year were having higher influenza vaccination knowledge scores than those who did not. Therefore, it is crucial that hospital managers should target at hospital workers' vaccination knowledge to increase their vaccination behavior.

SP-179

Effects of the Sakado School-Based "Shokuiku" Food and Nutrition Education Project on Breakfast and Snacks

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Purpose: The Sakado School-based Food and Nutrition Education project have been developed from 2006. The effectiveness on eating breakfast everyday, appropriate eating of snacks and influential factors by this education intervention was examined.
Method: This study is a quasi-experimental design. The control group is comprised of 694 fifth-graders who participated in 2006 and the intervention group is comprised of 808 fifth-graders participated in 2007 from all 13 primary schools in Sakado city.
The intervention group took new education program for 8 hours, and the control group was observed only. Children of both group completed questionnaires at the beginning of this study (Pre) and after one year (Post).
Results: As for the knowledge of food group, though significant differences were seen between Pre and Post of both group, the intervention group was significantly more improved than the control group ($p<0.01$). A positive attitude to health and diet, there was significant difference between Pre and Post in the intervention group only ($p<0.05$). With respect to self-efficacy for good health and eating behavior, the intervention group improved more than the control group for one year. Significantly more children in the intervention group ate breakfast every day than the control group ($p<0.05$). The intervention group significantly decreased intake frequency of soft beverage drinks after one year ($p<0.01$), but the control group did not significantly decrease.
Consideration: Education program is effective on intake of soft beverage drinks and eating breakfast everyday through improvement of predisposing factors.

SP-180

Health Status and Health Care Behavior among the Disabled People in Two Provinces of Thailand

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Objective: To study the situation of health status and health care behavior of the disabled people in two provinces of Thailand
Methods: A cross-sectional survey was conducted in 5,352 disabled people age over 15 years by multistage cluster sampling. The data were collected from April to June 2008 by interviewing questionnaires and in-dept interview. Data were analyzed by frequency and percentage.
Results: The most common disabilities were extremity abnormality (44.2%), intellectual impairment (16.3%), and visual defect (13.4). The common causes were congenital anomaly (42.4%), sequelae of chronic illness (31.4%), and accident (24.3%). For the disable level, 49.1% were partially self support, 44.8% were totally self support, and 6.1% were dependent. For the health care behavior, 69.7% had no exercise, by which 40.6% due to physical limitation, 47.2% did not seek medical consultation in the past one year. Most of the disabled people
(80.1%) received health information from television (57.6%) followed by health personnel (45.4%) and radio (39.5%). The disabled people needed social welfare and social right (74.8%), profession procurement (26.1%) and social acceptance (21.1%)
Conclusion: The important disability was extremities abnormality and common causes were congenital

anomaly and sequelae of chronic illness. Most of disabled people had no exercise and half of them did not seek medical consultation. The responsible organizations should provide the accessible social welfare and health care services to the disabled people.

SP-181

Quality of Life and Health Behaviors among Disabled People in Two Provinces of Thailand

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Objective: To examine health behaviors and quality of life among disabled people in two provinces of Thailand.
Material and Methods: A cross-sectional study using multistage cluster sampling was collected from 5,352 people who living with disabilities from Chiang Mai and Nakhon Ratchasima from April to June 2008. The WHOQOL-brief and health behavior scales were used to measure QOL and health behavior.
Results: Majority of disabled people had overall health behaviors related to exercise and health responsibility at need to improve level (46.6%,52.8%), while nutritional behavior and stress management was at good level (80.8%, 43.8%,). Overall quality of life was mostly at moderate level (79.3%), the second was good level (14.6%). Analysis of the relationship found that exercise and stress management had significantly positive relationships with quality of life at low level ($r = 0.18$, $r = 0.12$) at $p < 0.01$.
Conclusion: The result indicated that person who had health promoting behavior by nutrition, exercise, stress management were good QOL. An intervention study should be conducted to promote family and health authority support in promoting quality of life.

SP-182

Factors Associated with Hospitalization in Long-Term Care Frail Persons

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Investigating the situation of being hospitalized and associate factors in long-term care frail persons. A historical cohort method is adopted to conduct the study. After identification of home nursing cases from the outpatient claimed database of the Bureau of National Health Insurance in 2002 as investigating targets. Those cases were be connected to the diagnosis or case reports of outpatient and inpatient. The logistic regression was used to analysis the risk of being hospitalized after adjusting the patient and hospital characteristics. Among the 26,760 home nursing of long-term care cases in 2002, percentage of female was 53%, age >65 years old was 82%, 66% at home and 34% at institutions. Among those study cases, the percentage of being hospitalized was 73%, 222 times hospitalizations per hundred persons, and average frequency of inpatient is 3 times for every hospitalized case per year. From the results of analysis, it reveals that male, age over 65 years old, with significant disease and insurance location is at central Taiwan, living in Nursing Home, home visit serviced by affiliated with hospital and the institutions of total home visit over 172 times will have higher hospitalized ratio. Certain potential modifiable factors appear to be associated with hospitalization. Greater attention to improve control these factors may lead to improve outcomes in home nursing patients, which could result in reduced hospitalization and cost savings. To create subacute care system and enhance the connection of discharge planning and long term care resources is important.

SP-183

Perspective from Health Professionals on Delivery of Sub-Acute Care in Hong Kong

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Background: A number of studies have shown that unnecessary hospital admission and delayed patient discharge was significantly high. The provision of sub-acute care services aims to act a bridge between hospitals and home so as to reduce avoidable readmission.
Study Aim: The purpose of this study was to explore the perceived definition, role and quality of sub-acute care services in the context of Hong Kong from the perspective of health service providers.
Methods: Seven focus groups were conducted with a purposive sample of 50 participants from public and private health sectors. Discussion was led by a guide covering two main areas: definition/role of sub-acute care and quality of sub-acute care provision in the healthcare system.
Results: The sub-acute care was defined in this study as a phase between acute and convalescent stage or between acute and community. The roles of the provision of sub-acute care as an important component in the healthcare system to improve the quality of care, reduce avoidable hospital admission and facilitate early hospital discharge were acknowledged. For the quality, a number of barriers are identified including lack of service coordination between acute and sub-acute provisions, lack of communication between medical and social care, and inadequate specialist input and resources in the sub-acute care.
Conclusions: To enhance the quality of sub-acute care provision, the interface of sub-acute care with all health services sectors and stakeholders should be well coordinated and communicated so as to ensure integration with the whole system.

SP-184

C-Reactive Protein Is Associated with Silent Brain Infarction in General Population

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High sensitive C-reactive protein (CRP) has shown a strong association with increased risks of clinical vascular diseases. However, the association with silent brain infarction (SBI) is unclear, especially in the population with low CRP levels. We explore to observe the association of CRP and SBI in general population. Total of 74 cases and 296 controls included from 2 studies in community. Case is those had no history of stroke but had ischemic lesion in brain MRI. Four randomly sampled controls matched by age, gender and study population, from those subjects without SBI. All persons accessed the CRP levels. The subjects with SBI, than without SBI, had significantly more hypertensive, diabetics, hyperlipidemia, history of cardio-vascular disease, and higher proportions of above median CRP(≧0.133 mg/dL). Of raised CRP level to SBI risk, the age- & sex-adjusted odd ratio (OR) is 1.87 (p=0.0237) and multivariate OR is 1.71 (p=0.0569). Elevated CRP level had most markedly progression additive effects with higher Framingham stroke scores (FSS, ≧10) and serious plaque score (PS, ≧4). The persons with above median CRP levels had an additional SBI risk in those with raised FSS (OR, p: 4.06, 0.0014) or PS (3.89, 0.0004), whereas, in those without raised FSS or PS risk, those with below median CRP level did not have an increased SBI risk.

SP-185

Correlates and Accuracy of Osteoporosis Screening among Female Community Residents

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Objectives: To explore the correlates of osteoporosis screening behavior among female community residents and to examine the accuracy of osteoporosis screening.
Method: A telephone survey was conducted using nation-wide representative samples of female community residents aged 25 and older. Data were collected using computer-assisted telephone interview systems by stratified random sampling according to geographic areas. This survey (N=1,074) was conducted weekdays from September 24 to 30, 2008. A logistic regression was used to explore association between demographic variables and osteoporosis screening behavior.
Results: A total of 29.2% subjects underwent quantitative ultrasound (QUS) and 13.4% underwent dual-energy X-ray absorptiometry (DXA) in the past year, with abnormality rates of 35.3% and 32.7%, respectively. The false positive rate of QUS based on DXA outcome was 26.1%; however, only 28.8% of subjects with osteoporosis diagnosed by QUS further undertook DXA. Multiple logistic regression analyses revealed that age 65 or above(OR=3.83, 95%CI=2.03-7.23), age 51 to 64(OR=2.31, 95%CI=1.55-3.45), northern residential area (OR=3.38, 95%CI=1.27-9.00), central residential area (OR=3.74, 95%CI=1.35-10.32), southern residential area (OR=3.75, 95%CI=1.39-10.07), those having a full time job(OR=1.46, 95%CI=1.03-2.06), were more likely to undergo QUS compared to their counterparts, after controlling for subjects' level of education and household income.
Conclusions: Age, residential area, and working status were significantly correlated with osteoporosis screening behavior. We therefore not only call for increased awareness on osteoporosis screening but also recommend further investigation once diagnosed with osteoporosis by QUS.

SP-186

Caregiver Burden among Caregivers for Children with Rare Diseases

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Objective: The aim of this study was to explore the level of caregiver burden for rare disease children.
Method: There were 695 rare disease children aged 7-15 registered as members of the Taiwan Foundation for Rare Disorders. An anonymous questionnaire for the caregiver was mailed to these members' family. A total of 344 subjects were recruited in this survey with the response rate of 49.5%. A total of 231 subjects meet the criteria of government announced rare diseases and were included in the data analyses. The Chinese version of Caregiver Burden Inventory (CCBI) and Zarit's burden Interview-Chinese version (CZBI) were used as an instrument to measure the level of caregiver burden.
Results: The main caregiver of these rare disease children was the mother (80.5%), the father (13.4%) and others (6.1%). Roughly 47.2% of the children were diagnosed as having rare disease before two years of age, and 67.1% of their diseases were reported under control during the survey period. The mean score of the CCBI was 43.53±18.94 and it was lower than that of patients with dementia from other studies. Besides, the mean score of the CZBI was 36.04±15.94 and it was higher than that of patients with dementia from other studies.
Conclusion: The difference of mean CCBI/CZBI score of patients in this study compared to other studies raises the importance of targeted and tailored educational counseling for this high-risk population.

SP-187

Factors Contributing to Uptake of Influenza Vaccine among Community-Dwelling Elderly in Taiwan

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Objective: The objective of this study is to investigate the relationships between influenza vaccination and health status, health behavior, living arrangement, and outpatient visits for community-dwelling elderly.
Methods: This study selected a cross-sectional sample of elderly aged 65 and above from the National Health Interview Survey (NHIS) in 2005. The study sample represented senior citizens who resided in Taiwan in 2005, due to the sampling method of probability proportional to size used in NHIS. Data on individual influenza vaccination status in the last year was collected by questionnaire in NHIS. Analysis was conducted using Chi-square and logistic regression.
Results: Vaccine uptake in the total sample of 2,621 elderly was 57.6%. For male, those aged between 75 and 84 (OR=1.2, 95%CI=1.0, 1.4), living with spouse (OR=1.4, 95%CI=1.1, 1.7), suffering with heart (OR=1.2, 95%CI=1.0, 1.4) or respiratory disease (OR=1.3, 95%CI=1.0, 1.5), keeping good health behaviors like exercise (OR=1.3, 95%CI=1.2, 1.5) and health examination (OR=1.6, 95%CI=1.4, 1.8), and making outpatient visits for last month (OR=1.2, 95%CI=1.1, 1.4), were more likely to uptake influenza vaccine. For female, elderly with diabetes (OR=1.3, 95%CI=1.1, 1.5), doing exercise (OR=1.2, 95%CI=1.0, 1.3) and health examination (OR=1.5, 95%CI=1.3, 1.8), and making outpatient visit for last month (OR=1.3, 95%CI=1.1, 1.5), were more likely to uptake influenza vaccine.
Conclusions: Vaccine uptake was associated with good health behavior, health status, and outpatient visit for both gender, and linked to living arrangement and age group for male.

SP-188

Different Types of Physical Activity and Eight-Year All-Cause Mortality among Taiwanese Older Adults

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Background: This study was designed to assess the effects of overall and different types of physical activity on all-cause mortality among older adults.
Methods: This research was a population-based study of residents aged 65 years and older (N=2133) in the township of Hunei in Taiwan from 1999 to 2007. There were 649 deaths during a mean follow-up of 6.9 years. Physical activity was evaluated with the Physical Activity Scale for the Elderly (PASE). The Cox proportional hazard models were used to estimate the association of physical activity with mortality adjusted for baseline potential confounders. Etiological fractions of death for physical activity among the exposed group were calculated.
Results: This study showed an inverse pattern of association between leisure physical activity and mortality with a 68% and 34% increase in low active men and women with multivariate adjustment. The low household activity groups had more than 30% increase in mortality risk. No significant association was found between work-related physical activity and longevity. The low overall physical activity group had 64% increase in the risk of all-cause mortality. Around 20% of death in the population was attributable to leisure, household or overall physical activity.
Conclusion: This study extends the understanding of associations between different types of physical activity and longevity for the Chinese in Taiwan and fills the gap in the existing literature focusing on Western countries.

SP-189

Prospective Study of Physical Activity and Academic Performance in Elementary School Children

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Introduction: The relationship of physical activity with academic performance among school children with a six-month follow-up period was studied.
Methods: Data were collected among the grade six students (n=409, boys: 210) in one school in Taichung County, Taiwan from the first semester of the 2007 academic year with a six-month follow-up interval. Academic performance (outcome) was the total scores in the end of the second semester of the 2007 academic year provided by the shcool. Physical activity (exposure) was measured using the International Physical Activity Questionnaire (IPAQ). Covariates included gender, intelligence quotient, depressive symptoms, baseline academic performance, father's/mother's educational level, whether the child belongs to single parent household. Multiple linear regression model was then adopted for predicting academic performance. The Model was conducted again statified by genders and then by different subjects, comprising language and mathematics.
Results: Children whose participation in high or moderate physical activity level had higher scores than low physical activity level (high: β=4.60, $p<.01$; moderate: β=3.50, $p<.05$). Boys whose participation in high or moderate physical activity level had higher scores than those with low physical activity (high: β=4.99, $p<.01$; moderate: β=4.88, $p<.05$), but no significant correlation was found in girls. Those who with high activity level performed better on subjects of language (β=4.04, $p<.01$) and mathematics (β=4.54, $p<.01$).

Conclusions: Physical activity is positively associated with academic performance in elementary school children. Eeducational authorities, schools and parents should encourage children to participate physical activity regularly.

SP-190

Benzodiazepine Misuse Problem and Developement to Narcortic Drug in Rural Area Thailand

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Background: benzodiazepine is one of sedative and hypnotic drugs. Increasing of its misuse and abuse makes it play an important role as narcotic drugs in Thai society.
Study Design: A qualitative research was conducted for this research. Source of data and key informant: 18 key informants willing to participate in this study were drawn from a population based survey of sedative and hypnotic drug use in rural area, northeastern region of Thailand. As misuse and abuse drug users, key informants were identified in accordance with international standard criteria of DSM IV (revised version 1994).
Method: An in-depth interview of misuse experiences was implemented. Data analysis was performed using content analysis and triangulation methods.
Result: Most frequently used Benzodiazepine drugs were Diazepam, Lorazepam and Alprazoram. Most misused group was women who were housewife. Usually drug misuse begins with medical treatment and then drug addiction is slightly developed. Most of key informants were patients who habituated drug used reflected that benzodiazepine in their lives is harmless. Some user used Benzodiazepine as narcotic drugs, second line drugs and used involved with cannabis, alcohol and methamphetamine. Drug users can easily find out Benzodiazepine from hospitals and some of them bought from nightclubs and smugglers from Thai-Lao free trade border.
Conclusion: Sedative and hypnotic drugs in Benzodiazepine group have been increasing misuse until becoming abuse. Medical Law need increased strictly control and medicine dispensation of medical treatment in public health system should be seriously considered.

SP-191

Scoda as Peer Education Based on Senior High School in Effort to Prevent Drugs Abuse

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Threat caused by drugs in Indonesia was increasing especially at young generation. High school student need the different ways to prevent drugs abuse. One of them, it's a peer education program. Therefore, it needed something like organization at student level which can give information. Then, it created a Study Club on Drugs Abuse (SCODA) as a peer education school-based on drugs abuse prevention. This activity was implemented in one high school in Gresik. Method of the activity was student empowerment and advocating. Student empowerment conducted through training program by giving subjects, simulations, games, giving assignment and study tour. Whereas advocating in order to get commitment from school side to develop the organization. The instruments used were questionnaire, subject module, training kit, simulation and game tools. For evaluation the program used pre-post test. The outcome that have been got from these activities were Study Club on Drugs Abuse (SCODA) as peer education organization to prevent drug abuse, members of SCODA as many as 14 students who done elucidation and extension for 100 students in same school and increased knowledge about drugs and prevention measures among them. Furthermore, it can decrease drugs abuse rates among high school student. Finally, SCODA can be developed to other high schools in Indonesia, as well.

SP-192

Usefulness of Self-Report of Hypertension in Predicting Follow-Up Risks of Chronic Diseases and Mortality of Older Taiwanese

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Background: Hypertension is prevalent in the elderly. It can increase the risk of many chronic diseases and mortality. In epidemiological studies hypertension is usually determined with clinical measurement of blood pressure. However, in social survey studies, hypertension is often identified with self-report without measurement.
Objective: This study aimed to determine the usefulness of self-report of hypertension in predicting the risk of follow-up chronic diseases and mortality in older adults.
Methods: The study analyzed data of a population-representative cross-sectional cohort study in older Taiwanese. Subjects' health conditions were analyzed at baseline in 1989 and the occurrences of new stroke, heart disease, diabetes and chronic kidney disease cases in 1999 were analyzed. Regression analysis determined the impact of hypertension on the occurrence of common chronic diseases and mortality.
Results: The prevalence of self-reported hypertension at baseline (1989) was approximately 27% (24% in men and 30% in women) for Taiwanese, 60 years or older. Elderly who self-reported hypertension had increased risk of follow-up stroke and heart disease ($p<0.05$). However, the impact on chronic kidney disease and diabetes was not statistically significant. Elderly who self-reported hypertension also had a 38% increase in mortality risk according to regression analysis.
Conclusion: Self-report of hypertension is associated with an increased risk of follow-up stroke, heart disease

and mortality. It may be of value as a proxy of hypertension prevalence but not for identifying hypertensive individuals for intervention.

SP-193

Impact of a Community Approach to Prevent Road Traffic Injuries in Rural Setting of Thailand

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Road Traffic Accidents (RTA) is a major public health problem in Thailand. The aim of the project was to promote safety awareness among road users of rural communities in the Chaing Rai province (September 2007- June 2008). The project was completed in three phases: (1) Community survey; (2) development of community network and road safety plan; and (3) monitoring and evaluation.
The survey was conducted on 1,024 road users, aged between 15 and 60 years (mean age 35.32; male: female ratio, 1.4:1) . The survey determined, in the year preceding the survey, 57 road users sustained a traffic injury which required visiting a health care service or being absent from work/school for at least 1 day (morbidity rate 55.66/1000). Almost three-quarters (70%) of all reported traffic injures were male motorcyclists, aged 15-24 years old and the main causes of RTA injury related to drink driving (46.03%) and high speed driving (33.33%).
The community network consisting of 50 members used the survey information to create and implement a master plan for road safety which involved a set of activities to gain safety knowledge and awareness in the community. The evaluation revealed a significant reduction of RTA mortality after implementation of the network activities when compared to RTA mortality in the same period of the preceded year. Although to enhance safety behaviors; teaching skills is not sufficient and social enforcement and punishment that fit to the local context need to be developed in sync with raising awareness of road safety issues.

SP-194

A Global Comparison of Physical and Social Environments between More and Less Urbanized Countries

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The impact of rapid urbanization on health is one of the major public health challenges in the 21st century. An understanding of how urbanization affects our living environments is important for better health. This study aims to investigate the association between the urbanization level and physical and social environments. Data on the urbanization level as measured by the proportion of urban population and physical and social environments as measured using the Millennium Development Goals (MDG) indicators during the period of 2000-2008 were collected for 195 countries. Higher urbanization level significantly correlated with better physical and social environments: less poverty, better employment conditions, less undernourishment, more education, more gender equality, higher antiretroviral therapy coverage, lower proportion of slum-dwellers, and more connections to safe drinking water, basic sanitation, telephone lines, cellular phones, and internet. As less urbanized countries are speeding up the rate of urbanization through natural population increases, ensuring the concurrent development of physical and social environments is important for these countries. On the other hand, higher urbanization level significantly correlated with more emissions of carbon dioxide and consumptions of ozone-depleting substances and water resources, raising concerns about increasing environmental loads and global climate changes. In conclusion, this study identified that higher urbanization level is a key factor associated with better physical and social environments. Less urbanized countries should be the target of providing better physical and social living environments; while more urbanized countries should focus more on reducing emissions of global warming substances and depletions of natural resources.

SP-195

Men's Knowledge of Cancer Cervix (CaCx) and Pap Smear Screening (Papss) Predicting Spouse's Screening Behavior. Contribution of Gender Roles in Reproductive Health

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This paper links Malaysian men's knowledge in cervical cancer (CaCx) and pap smear screening (Papss) to gender roles in reproductive health. It is part of a larger multi-centered, transdisciplinary research project sponsored by the Ministry of Science and Technology, Malaysia. Data were collected via structured questionnaire and self-administered to 132 Chinese and Indians of selected urban and rural based household units in Northern Malaysia. Respondents were asked if they have heard of CaCx and Papss, where do they hear or obtain the information, on knowledge of signs and symptoms, causes, treatment available, reasons for as well as procedures, eligibility, timing and frequency of practicing Papss. . Overall, their knowledge on CaCx and Papss was low. However, literature on men's communication and support seemed to influence spouse' Papss seeking behaviour. Thus, improving men's knowledge on CaCx and Papss is evidently critical. Men's participation on women's health could alter some of the belief and perception of women of high CaCx risks to practice Papss. Since current findings reveal that newspapers and friends provide men with

information on CaCx and Papss more than any other sources, it is necessary that the message of what, why, when, where and who of Papss reach the primary (women) and secondary (men) audience effectively. Advancing men's roles in reproductive health can be sampled in the forms of testimonies, fact and figures from health ministries and agencies locally and globally and place in media that reach men and women. Health protocols could advocate men's involvement in reproductive health would eventually benefit not only women but also men and future generation which in turn affects the country's public health.

SP-196

Anaemia Prevalence and Fitness Status among Student of Female Islamic Boarding School in Coastal Area and Non Coastal Area

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There are thousand of Islamic boarding schools in East Java, some of them located in coastal area. Islamic boarding school that located in coastal area have some advantages of animal protein availability, because of fisherman product. Animal protein from fish have much iron content. Therefore, this research aimed to learn the difference of anemia prevalence and fitness status among student of female Islamic boarding school in the coastal area and non coastal area. The design of research was cross sectional comparative study. The population was female student of yunior high school and senior high school who lived in Al Amanah Al Fathimiyah Islamic Boarding School in Jombang as represent of non coastal area and Mazra'atul Ulum Islamic Boarding School in Lamongan as represent of coastal area. The sample was 12-18 years old female student, living in the Islamic boarding school, good condition and not in menstruation period. The sample size was 41 students in each area, taken by systematic random sampling. The variables covered social cultural factor, pattern of consumption, supplement consumption, nutrition consumption, nutritional status, feces status, characteristic of Islamic boarding school, anemia status and fitness status. End result of chi-square test and simple logistic regression test showed a significant relationship of anemia status between Islamic boarding school in the coastal area and non coastal area. But, result of Mann Whitney test and simple ordinal regression test showed not significant relationship for fitness status between Islamic boarding school in the coastal area and non coastal area

SP-197

Improving Women's Skills in Critical Thinking, Family Economics and Management in Iran: CBPR

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Objective : To empower women of Qazvin in critical thinking , family economics and management.
Methods : Community Based Participatory Research (CBPR) was conducted in a population of 50000 consisting about 12000 families. A total number of 45 household volunteers participated in workshops organized by the university and each volunteer thaught between 5 to 20 women using especially tailored learning modules. After 2 months the practice of the 100 women in the intervention group was compared to the control one using self - administered questionnaires and the data were interpreted.
Results : According to our monitoring and assessment more than 500 women were exposed to the learning process using both formal and informal learning models. About 16% of a the control group and 98% of the study group got used to mind mapping in their problem solving, 28% of the control group vs 89% study one used planning in their family life and 14% if the control group vs 74% of the study group chose their goods according to their family objectives.
Conclusion : Improvement of the women's skills in critical thinking, family economics management can lead to better family performance.

SP-198

Surveillance in Occupational Health: the System of Medical Examination for Migrant Workers in Taiwan

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Objectives: Workplace medical examination plays an important role in protecting workers' occupational health. Under the context of globalization, medical examination appears to play rather a role of epidemic control than that of health protection for migrant workers. In this paper, we investigate the current health surveillance system for migrant workers in Taiwan as well as explore the limitations of the system. Methods: This study is based on a literature analysis of the design and implementations of relevant laws and regulations. Results: In terms of occupational health management, the Taiwanese health surveillance system discriminates against migrant workers in that they are compulsory to take more items of medical examination in comparison with domestic workers, and they may be deported because of the result of examination. Medical examination is a process of medical gaze, during which the body and the action of a migrant worker become the objects which the mechanism of social surveillance displays. Migrant workers in Taiwan suffered not only from the power disparity caused by medical knowledge between the doctor and themselves but also their disadvantages of language and culture. Medicine, therefore, has actual social power that transcends the essence of science. Conclusions: In terms of protecting workers' health, the state gives precedence to domestic

workers over migrants since the latter owns little industrial citizenship. The current system has departed far from the core value of occupational health inspection, in that medicine and law form a stringent net of social surveillance.

SP-199

Child Nutritional Status in Indonesia and Its Transition in an Era of Economic Growth

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Background: Indonesia has experienced drastic changes in its socioeconomic conditions during the last half century, sustaining a move in dietary habits away from "traditional" to more "modernized" lifestyles. This review looks at the important of economic transition associated with changes in the consumption and children nutritional status trends.
Methodology: The major reference source used to develop this evaluation is the National Socio-economic Survey (SUSENAS). Secondary economic, dietary intake and anthropometric data is synthesized from local, regional and international published and unpublished reports and papers to provide evidence of food and nutrition trends and associated health implications.
Results: The country has experienced rapid dietary and lifestyle changes characterised by a double burden of disease in which chronic disease has become more prevalent while infectious disease remains undefeated. Economic transformation has altered the social demographic structure and contributed to large shifts in overall dietary patterns. Life expectancy has improved and infant and child mortality rates have substantially decreased. Despite this improvement, more than half of the population still suffer from various forms of nutritional deficiencies. At the same time, excessive and unbalanced intakes of food associated with changes in lifestyle are becoming serious public health issues related to increasing rates of overweight and obesity. This epidemiological and nutritional transition has seen concurrently changed to the extent where Indonesian children now suffer significant health problems associated with both under and over nutrition.

SP-200

Knowledge About Avian Influenza and the Use of Personal Protective Equipment by Rural Poultry Producers in Suphanburi Province, Thailand

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This study aimed to describe the level of knowledge regarding avian influenza and the use of personal protective equipment (PPE), by poultry producers in rural Thailand. Four focus group discussions were conducted in June 2008 in Suphanburi Province, which reported five waves of highly pathogenic avian influenza H5N1 between the years 2003-2007. All participants raised poultry at the time of the H5N1 outbreaks. Multiple types of poultry production were represented, including backyard chickens, ducks, and fighting cocks. Two of the focus groups were conducted in areas where there had been two or more previous episodes of H5N1 poultry infection, and two groups were conducted in areas which had experienced only one episode. Of the 33 participants, 20 were male, and the age range was 25-81 years (mean = 51). The focus group questions aimed to identify the participants' perceived risks from avian influenza, as well as the perceived benefits from and barriers to PPE use. Overall, the knowledge of the clinical signs of avian influenza was limited, and the participants perceived a low risk to humans and poultry. This was reflected in a reported lack of PPE-use. These findings were consistent in all groups, regardless of the number of outbreaks experienced. The reported barriers to PPE-use included a combination of cultural, educational and socio-economic factors, suggesting that the promotion of avian influenza awareness must include the transfer of knowledge in addition to the provision of PPE itself.

SP-201

Five Leading Causes of Mortality and Its Impact on Economy in Mongolia, 2003-2007

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Background: In 2007, 36 percent of the population mortality causes was circulatory system diseases, 20.1 percentages was cancer, and 19.2 percentages was injury, intoxication and diseases caused by external causes. Moreover, population mortality level for 10000 male population is 77.36, and 10000 female population is 45.11.
Methodology: Mortality data collected by the Health Info Data Set. Years of Potential Life Lost (YPLL) and the impact on economy were analyzed. Objectives: To analyze mortality data and to assess the impact on its economy.
Result: According to our study, injury is placed in the leading place (76054.2), circulatory system diseases place (40640.3) second and cancer places (24454.6) third in mortality causes in order (The average age of the people who died due to the leading 5 causes of mortality is 48.5). The five leading causes of mortality were high percentage among 40-54 year old and economically active population dies from these diseases which indicate that it harms the state and economy greatly. The fact mainly 25-49 year old people are died from injury and economic loss due to injury or "partial production" of GDP was equal to 2.4 billion tugriks in estimation of

working age population death due to leading causes of mortality on economy.
Conclusion: The mortality slightly increased in last 5 years among all age groups in the country and the fact of starting to use the specialized estimation of effects of population mortality from leading diseases on economy in policy formulation operation in developed countries is being essential.

SP-202

Globalization as a Social Determinant of Health: Influence on Food Consumption among Young People in Bangladesh

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Globalization as a social determinant of health is a relatively new construct. Worldwide, globalization is beginning to be associated with the rise of non-communicable disease via different pathways. Changes in food consumption pattern is one of the pathway through which globalization has affected the health of the young people in recent decades. Since 1990, Bangladesh has experienced major changes due to the structures and processes of globalization. The current qualitative focused ethnographic study explores the macro structures and processes of globalization in Bangladesh and examines the food consumption pattern of young students in a private university of Dhaka. It was found that most students are regular consumers of 'fast food' and many suffer from health consequences, e.g., obesity etc. Health information, education and services are inadequate even if financial access is not an issue. Globalization seems to have promoted an uncontrolled growth of trans-national food corporations (TNC) as well as a 'global' lifestyle. Policy and programs are found to be inadequate to combat the aggressive advertising of the TNC and consumerist youth lifestyle. Immediate action is required to address the negative effects of globalization on the food consumption pattern of the youth.

SP-203

Socio-Cultural Dynamics in an Upazila Health Complex: An Exploration

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Understanding the dynamics in Upazila Health Complex (UHC) is imperative in Bangladesh as it is the nucleus of PHC delivery. The study aimed at describing the epidemiological trend that lead the patients towards UHC and consequently drive them through the complex socio-cultural dynamics among different stakeholders that influences the perceived responsiveness of the patients. The mixed method study comprised inter-disciplinary approaches: epidemiology, anthropology and health systems. Quantitative data for epidemiological pattern was generated through Patient Flow Record, Disease Profile and SRS from Patients Registry Book. Participant observation, document review, in-depth interview, FGD and debate between attendants and providers were used for qualitative data collection. Responsiveness data were generated through exit surveys. Epidemiological data suggested dramatic increase of Inhalation poisoning during the Bengali months of Bhadra-Ashwin (paddy plantation time) going overlooked by authority. Manpower shortage was the mother cause of many consequences which again was linked with problems of rural settings e.g. undue political pressure, cultural mismatch, electricity shortage, lack of security, transport facility, educational institutions for children and entertainment. Some innovative therapeutic (using straw as dropper, strap of saline bottle as micropore) and management practices (using medicine of affluent patents for needy ones) were observed utilizing locally available resources. Responsiveness of the hospital was perceived ‘good’ by patients using WHO questionnaire but ‘bad’ using proposed questionnaire. The inter-disciplinary approach yielded policy recommendations e.g. considering Disease Profile for rational medicine supply, performing anthropological research to understand local construct of prevalent diseases, introducing realistic client complain mechani

SP-204

Life Satisfaction Trajectories, Economic Status and Successful Aging among Taiwanese Elderly

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Purpose: Successful aging is composed of physical, mental and social dimensions of health. However, the economic dimension is often neglected, and the relationship of dynamic change among successful aging indicators to overall subjective well-being was less explored. This study was to explore the life satisfaction trajectories, and the relationship of subjective economic status with the time-varying successful aging to life satisfaction among the Taiwanese elderly.
Methods: Data were from the four waves of “Survey of Health and Living Status of the Elderly in Taiwan” in this study. Multilevel regression analysis was conducted. Economic status was measured by individual-level childhood economic status and time-varying subjective economic satisfaction. Time-varying physical, mental, and social successful aging variables and demographics were also used to describe the life satisfaction trajectories.
Results: Life satisfaction showed a slightly increasing linear trajectory across time. Higher educated and female had higher increase of life satisfaction across time. Childhood financial status was not related to the life satisfaction trajectories, but the lagged (beta=0.338, $p<0.05$) and the change (beta=0.290, $p<0.001$) of economic satisfaction was associated with life satisfaction. The lagged and the change of depressive

symptoms and cognitive function were related to life satisfaction trajectories, but other time-varying successful aging indicators were not significant.
Discussion: Subjective economic status and mental health are important factors of subjective well-being for the Taiwanese elderly. Economic security and mental health of the elderly should be particularly noticed in the elder policy.

SP-205

Informal Payment in Health Sector and Its Financial Burden to Households

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Background: Some survey reports showed that main reasons for health care service informal payment were low salary of health professionals (85.9%), limited situation of service sufficiency (84.3%), and the majority of informal payments were given in hospitalization (44.7%). According to these study result influence of this condition to individual and/or household's financing is not mentioned.
Methodology: In this study used a self-administered questionnaire and data collected from patients in the secondary and tertiary level hospitals in Ulaanbaatar city, and Darkhan-Uul, Orkhon aimags.
Objective: To identify informal payment burden to households. Results: In this study participated 673 inpatients and 35-54 year old people were the majority of the inpatients and the average age was 45, when we studied the age groups and gender relevance of total survey participants. 97.6 percent of participants had health insurance in our study, 59.6 percent of the has answered "Yes" in the question "Have you paid fees to receive other hospital services?" which implies still existing informal payment in hospitals. We found that informal payment is a financial burden to poor people and 30 percent of the family monthly income of poor household is spent on informal payment when one of the family members becomes sick. Conclusion: People are paying in average of 99200 tugriks as informal payment during hospitalization and it is becoming an extreme financial burden to poor households with low income. Although health insurance is not being able to protect the poor people from the financial risks.

SP-206

A Study on the Factors of the Willingness to Use Community-Based Long-Term Care Services

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Aim: The purpose of this research is to assess whether the disabled were willing to co-pay for community-based long-term care services.
Methods: Study subjects were selected from Sansia township, Yingge township, and Chia-yi city. Face-to-face interviews were conducted with disabled persons. Only those who were 20 years or older and those who have responded to needing either home care, day care, or respite care were included in the analysis. The final number of respondents included was 702.
Results: Respondents averaged around 65 years old. As many as two-third of them had fewer than six years of education. Less than 30% of them were willing to co-pay for using any one of these three long-term care services. Logistic regression shows that after controlling for other variables, being younger, having more ADL disabilities, and being more educated were associated with willingness to co-pay for using these services.
Conclusion: Willingness to co-pay for using services were low among the disabled in need of these services. Health and social welfare agencies should attempt to increase the awareness and acceptance of co-payment among the disabled. Furthermore, a low-level of co-payment may very well significantly decrease access to community-based long-term care among the disabled, and any attempt to set the level of co-payment should be well supported by economic and service utilization research.

SP-207

Health-Related Quality of Life and Neighborhood Disadvantages among Diabetes Patients

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Objective: The purpose of this study is to examine the association of the county- and individual-level socioeconomic status, and health related quality of life of diabetes mellitus (DM) patients in Taiwan.
Methods: Data on individual-level characteristics, socioeconomic status and health related quality of life (SF-36) were obtained from National Health Interview Survey in 2005. Individual characteristics were included sex, age, and marital status; and individual socioeconomic status was measured by education attainment, employment, and household income per month. The county disadvantage score was derived from the Important Indicators of County, and was calculated for each county using a z-score summing by three indicators: (1) percentage of unemployed population, (2) percentage of population with a level of education less than high school, and (3) percentage of population living below poverty line. Multilevel model was used to examine this question.
Results: We excluded from under age 20 and missing data on individual information and the remaining study sample included 540 DM patients nested within 23 counties. County-level disadvantage score is negatively related to physical health (PCS), and positively related to mental health (MCS). Individual-level socioeconomic status such as unemployment and low income status were related to physical health and mental health, and yet marital status and education were related to mental health only.

Conclusion: Physical health and mental health are two different domains of quality of life, and both are related to neighborhood disadvantage status.

SP-208

The Effects of Perceived Health Status for Elderly on Eldest Son's and Eldest Daughter's Intergeneration Communication- A Case Study of Elderly Over Age of 60 Years

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Research Background and Purposes: The influences of population ageing and declining birthrate have led to many challenges for informal elder care, while the responsibility of informal elder care is mainly taken by adult children. Therefore, this study selected the elders of different self-perception of health conditions as research subjects, in order to investigate the generational communication between the elders and their eldest sons and daughters and to analyze the influences of extent of generational communication on self-perception of health conditions.
Research Method: This study used a secondary data analysis of cross-sectional studies to analyze the data released from the RR2006 database of the Programs for the Study of Chinese Families of Academia Sinica in 2006. The subjects were 833 elderly people over the age of 60.
Research Results: There were three findings in the results: First, in the aspect of variable of socio-demographic characteristics, elderly female, presently unemployed, had not retired, and the elderly with worse living conditions over the past year showed worse self-perception of health conditions. Second, in the aspect of variable of the extent of generational communication between the elderly people and their eldest sons and daughters, it was found that the extent of generational communication between the elders and their eldest sons had no influence on self-perception of health conditions. Third, the weaker the extent of generational communication and associational solidarity between the elders and their eldest daughters were, the worse self-perception of health conditions was.
Research Conclusions: Elderly female, presently unemployed, had not retired, and the elderly who had poor living conditions over the past year showed worse self-perception of health conditions. The elderly people who had weaker extent of associational solidarity and structural solidarity with their eldest daughters had worse self-perception of health conditions; however, the extent of generational communication between the elders and their eldest sons had no significant influence on self-perception of health conditions.

SP-209

The Caution of Children's Desease of Mongolia

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To develop of bronchitis and pneumonia of young aged children's and diseases of CVS and urinogenital system- of later aged children's influenced sanitary conditions of life. In Mongolia had 541149 family, lives in ger and houses - 50,9 % and in apartment-49,1 %. Aim: The aim of research is to reveal of possible risk factors, such as sanitary household conditions of life on disease of RS, CVS and urinogenital system among children of Mongolia. Method's: Used accounting data of health of Ministry of Health of Mongolia and the Centre of Governmental Statistic's. Statistical processing is made on regression analysis on the program SPSS 11. Results of research: High risk for developing bronchitis and a pneumonia of children was residence in ger, absence of the centralized heating ($p \leq 0.001$) and impossibility of maintenance of optimum parameters of the microclimate ($p \leq 0.005$) and electrification ($p \leq 0.02$), kind of using fuel($p \leq 0.005$), absence of the centralized removal of liquid waste ($p \leq 0.004$), absence of the electric power ($p \leq 0.01$) render system of removal of a withdrawal of residing, as removal on a garbage tank ($p \leq 0.01$). Increase of disease of urinogenital system of children on later age is connected with local heating ($p \leq 0.0009$) and transporting water supply system ($p \leq 0.02$). Conclusion: Hygienic conditions of residing of the population of Mongolia cause risk of development diseases of RS, such as a pneumonia, a bronchitis. The most significant risk factors are: absence of central heating, the electric power, kind of used fuel for local heating.

SP-210

Relationship between Childhood Living Conditions and Adulthood Health

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Objectives: This study aims to investigate the impact of childhood living conditions on adulthood health in Korea, and whether these impacts remained after controlling for the respondent's own socioeconomic status.
Methods: This study uses the 2007 National Health and Nutrition Examination Survey (NHANES), which is a nationwide survey conducted on a cross-sectional probability sample of households. Based on 1,818 adults aged 19-64 years in 2007, logistic regression analysis is performed with poor self-rated health (SRH) as an outcome variable. Childhood living conditions are measured by father's education and occupational class at age 14, and respondent's own education, occupation, age, gender and family income are used as control variables.
Results: Childhood conditions were significantly associated with poor SRH. The respondents whose father's educational category was high were less likely to rate their health as poor than those whose father had no formal education, and the respondents whose father's

occupational class was non-manual or others were less likely to rate their health as poor than whose father's occupational class was manual. The associations remained relatively unchanged after controlling for the respondent's own socioeconomic status, while the effects were inconclusive for the respondents whose father had middle school education or higher.
Conclusion: Current socioeconomic status is very important predictor for individual health. This study shows that childhood living conditions also have significant impacts on adulthood health in Korea.

SP-211

Comparison of Risk Factors of Mortality between Urban and Rural Elderly Population in Korea

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Introduction: The elderly population is increasing rapidly in the world. The proportion of population aged 65 and above in South Korea is projected to rise markedly, from 9.9% in 2007, to 14.3% in 2018, and to 20.8% in 2026, becoming a hyper or post-aged society. Along with this phenomenon, it is also expected that the share of elderly population in rural area will rise remarkably, since the young population is more prone to migrate to the city than the elderly is. Place of residence has been implicated as a health determinant. Several studies have noted that a rural mortality disadvantage exists in the United States.
Objectives: This study aims to describe and compare mortality between urban and rural elderly populations in South Korea and identify factors affecting mortality disparities between two populations.
Methods: Employing the 2005 mortality data and census data provided by the National Statistical office, this study analyzes age-, sex-, and county-specific death rate.
Results: We found statistically significant regional differentials of mortality profiles. Among elderly men, the urban mortality level is much higher than that of rural. On the contrary, among elderly women, the urban mortality level is lower than that of rural. Moreover, rural men aged from 20 to 59 tend to show a higher mortality level than their urban counterparts. A further study that identifies factors causing differential mortality profiles between urban and rural is under investigation.

SP-212

Trend of Lung Cancer Mortality: A Comparison between Finland and Norway

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Objectives: The purpose of this research is to assess the trends of lung-cancer mortality and to identify relevant group-level predictors, using Finland and Norway as examples.
Materials and Methods: Data were extracted from OECD Health Data 2008. Lung-cancer mortality, health status, health-care resource, tobacco consumption, health-related expenditures, nutritional variables, and economic variables from 1960 to 2006 were included in the analysis. Pearson's correlation was used to assess the association with these variables and lung-cancer mortality. Tobacco-related policy/strategies were also compared between the two countries.
Results: Despite of showing a downward trend in tobacco consumption, Norway still exhibited an increasing trend in male lung-cancer mortality, contrary to what was observed in Finland. As for females, both countries showed an upward trend, consisted with most developed countries. Statistically significant factors related to female lung-cancer mortalities were health-care resources and utilization, and tobacco consumption. As for male lung-cancer mortality, the significant factors also included health expenditure, economic variables, and nutritional variables, in additional to health-care resources and tobacco consumption. Comparing tobacco control policies revealed that Norway focused more on legislation while Finland placed more emphasis on changing attitudes and values of the general public.
Conclusion: Some ecological-variables have been identified as predictors of lung-cancer mortality. However, the underlying mechanism of their effect on lung-cancer mortality needs to be further studies. While both Finland and Norway have reduced tobacco consumption over the years, differences in tobacco-control policies may have affected the trends in lung-cancer mortality in both countries.

SP-213

Ladies First? or Not: A Comparative Study between American and Swedish Students on Satisfaction with First Intercourse

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A survey of 182 Swedish and 290 American undergraduates participated in this study.
The survey consisted demographical information (such as age at the first intercourse, ethnic and family background), situation/circumstances regarding to first sexual intercourse (such as where, whom, relationship) and a satisfaction scale (physical and emotional satisfaction).
Both Swedish and American male students were more likely to experience orgasm ($p < 0.01$) than female students. Swedish and American undergraduates reported their first sexual intercourse at very similar age. However, Swedish undergraduates were more likely to be satisfied with their first sexual intercourse experience than their American counterparts ($p < 0.5$). Compared to American students, Swedish students reported more favorable attitude toward their sexual education curriculum. Important predictors of sexual satisfaction

of first intercourse included factors such as Discussion with partner ($p < .05$), Expecting the intercourse to occur ($p< .05$), Being in love ($p < .05$), and Use of contraceptive method ($p <.05$). Implications for researcher and educators are also discussed.

SP-214

Who Talk Ethical Issues in Public Health Area?

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The increasing numbers of publications on ethics indicated its importance. To aim for the more comprehension of utilization and to point-out the status and trend of ethical issues in public health for global researchers to combat in public health field. The research data were based on SCI and SSCI database which was accessed from the ISI Web of Knowledge during 1991 to 2008. Using"ethic"to search titles, abstracts, and keywords to identify ethic-related studies in the subject categories of"public,environmental&occupational health", "health care sciences&services", "health policy&services". Parameters analyzed included document types, page count, authorship, reference count, journal, author keywords and country of publication. 4,671 papers were published with fifteen document types. Sixty-four percent of all documents were articles. Articles were the most commonly contributed document type, and 2,993 articles were analyzed in this study. The publication pattern had increased steadily in last eighteen years. The most frequently used author keywords were'ethics'and followed by'informed consent','bioethics', and'palliative care'. All articles were published in 245 journals and from 97 countries. 8% of all articles were published in Social Science & Medicine and 7% of all articles were published in Academic Medicine. The top 3 highest percent of corresponding authors are USA(47%), UK(14%), and Canada(8.3%). The University of Toronto in Canada published the most articles with corresponding authors(1.4%).

SP-215

Identification of Elder's Characteristics Associated with Their Perceptions on Telehomecare

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Objective: Recent home care service demonstrated that the telehomecare (THC) is one of the best applications for promoting elderly health and living quality. However, patients' perception of THC technology is likely to influence its acceptability even THC progress intensified. The purpose of this study is to evaluate the association of elder's perceptions on THC with their characteristics.
Methods: A structure questionnaire interview was applied to survey patients through Department of Family Medicine, Taichung Veterans General Hospital (TVGH). The measurement tools have been reviewed and approved by Clinical Trail Authorization from the IRB of TVGH. Patient's interviews were conducted by a group of trained interviewers. Three major classes of data were collected: patient characteristics, perceptions and expectations of THC technology. The study participants were patients who visit TVGH constantly with aged 65 and over. The study period was from August to December 2008.
Results: The average age of participants is 80. Only 21% (20 of 96) of participants heard THC before. After interview, 33% participants were intent to use THC. There were concerns focused on the issues of cost, easy to use, clinical support, and low-efficacy related to the use of the THC. In addition, patient's perception of THC is associated with Barthel Index and accessibility of IT.
Conclusion: Despite many advanced THC innovation, these findings suggest that elder's characteristics and needs for using the THC as important variables that should be included in future THC development.

SP-216

Banning on Tobacco Advertising as Evidence Based Policy in East Java Indonesia

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Background: Smoking rates among youth have been increasing in Indonesia where is the fourth most populous country in the world with over 217 million people, and 30 percent of the population is under 15 years of age. The goal of the research was to provide evidence on cigarette advertisement and its association to youth smoking.
Method: A survey was conducted in four districts using a modified version of the Global Youth Tobacco Survey questionnaire among 1,630 students in 40 high schools. Variables that appeared related to smoking status (current smoking) were then analyzed using multivariate logistic regression.
Results: Some exposure channels appeared to be much more effective in reaching the students audience than others. Billboard and TV advertisements were seen very often by high percentage of all students, 71% and 89%, respectively. Surprisingly, 11% of them seen cigarette advertisement on teen magazines and this medium appeared to be associated with higher current smoking prevalence. The prevalence of current smoking was especially high among those who think that smokers are perceived as attractive, smoking facilitates socialization, better group work, increased concentration, self confidence, and good grades, make life easier. The perceptions were pervasive advertising themes. In multivariate analysis, having lots of reasons to smoke

was significantly associated with increased likelihood of smoking (OR = 12.98; 7.18 – 23.46).
Conclusions: Banning cigarette advertisement is a powerful way to undermine the (erroneous) association of smoking with attractive, self confidence, etc. that is a key message of cigarette advertisement. Complete ban on advertising is mandated.

SP-217

Factors Affecting on Myanmar Youth Workers' Smoking in Mae Sot, Thailand

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The main purpose of this study was to study factors affecting on Myanmar Youth Workers' smoking in Mae Sot, Thailand. A cross-sectional study was conducted to identify the general characteristics, enabling factors, reinforcing factors, knowledge and attitude toward smoking among 225 Myanmar Youth Workers in Mae Sot, Thailand from 01.02.2007 to 19.02.2007. The results showed that average age of the study population was 21 year and 89.7% was male. 36.0% passed primary school and 54.7% are factory worker. 51.1 % has high level of knowledge towards smoking and 71.1% has positive attitude. Most start smoke early in the age of 15-19 year old. Most smoked 1 to 3 rolls per day and duration of smoked were one to two years. There was significant association with age and smoking status and between sex and smoking, between availability of cigarette and smoking status, between knowledge and smoking status.(P value 0.041) and between attitude and smoking status. (P value 0.001). The significant association was determined between selling of cigarette nearby the working environment and smoking status. It was affected by family's members smoking especially brothers or sisters smoking are associated with smoking status. Health education and health related to smoking and prevention of smoking should be provided to Myanmar youth workers. Most get the first cigarette by buying on their own is high and most start to smoke under 18 so the law prohibited should be strongly provided on youth and the cessation service should be provided.

SP-218

Experiences of Implementing a Total Smoking Ban in a Health Promoting Psychiatric Hospital in Taiwan

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Background: In Taiwan, the revised Tobacco Control Act in Taiwan required total smoking ban in all healthcare settings. Tremendous resistance existed in most psychiatric hospitals. We applied the five standards of Ottawa Charter for health promoting hospitals to implement the total ban policy and compared the occurrence of adverse events before and after.
Methods: After the initial consensus was formed, we established a multidisciplinary committee, did a patient survey and developed an implementation plan. Major strategies included forecasting the new policy, cooperation of all parties, assuring smoke-free environments, adequately training and preparing staff, planning a therapeutic project, consulting and empowering patients and their families, and actively providing smoking cessation support. Occurrence of adverse events was monitored and analyzed. Carbon monoxide and FTND were used as an indicator of healthcare in smoking cessation.
Results: Among 182 hospitalized smokers, all were offered cessation advices, 89.6% attended focus groups, 36.8% received individual counseling, and 27.4% used medications. Patients cooperated well with the new regulations. There was no significant change in the numbers of aggression or discharge against medical advice and the number of seclusion was significantly decreased. The carbon monoxide was significant after 1st and 8th weeks of new policy. FTND was also significant in the past 3rd month and 1st week of policy.
Conclusion: With proper preparation, management and support, a total smoking ban can be introduced to an Asian psychiatric hospital without significant adverse effects.

SP-219

Relationship between Gender Equity and Health Promoting Behaviour within a Household- An Analysis of Married Men's Smoking Behaviour

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This study aims to find out the relationship between gender equity and health promoting behaviour within a household. To accommodate this study, married men's spending hours for household affairs and smoking behaviour are chosen as the index of gender equity within a household and health promoting behaviour respectively. Specific data utilised in this study are originated from the Korean Welfare Panel Study (KoWePs) 2006. The results of this study are as in the following: 1) In case of normal income household, health promoting behaviours (non-smoking behaviour) are influenced by higher family relationship satisfaction and overall life satisfaction that are increased as the married men's spending hours for household affairs increase. 2) The proportion of married men's time for housework does not impact on family relationship satisfaction, overall life satisfaction and smoking behaviour in the low income households. 3) Although the married men's spending time for household affairs on weekdays and weekends are similar in both of normal income household and low income household, married men's participation in household chores in low income group is

activated as replacement of women's work rather than sharing the household affairs with their partners. This study suggests that sharing household chores is the benefit for men rather than sacrifice of men. It is the opposite evidence towards the conservative perspective by supporting that men's participation in household affairs is not considered as men's sacrifice.

SP-221

Using Photovoice to Engage Hawaiian Youth in the Prevention of Underage Drinking

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Underage drinking (UAD) remains a public health problem with potentially severe consequences. Community-based interventions offer potential for UAD prevention. This qualitative pilot study used the PhotoVoice technique to engage youth in Hawaii in UAD prevention activities. A total of n=83 youth (ages 10-18) across all Hawaiian islands were recruited through community organizations. They met in 9 groups with trained adult facilitators who instructed them in taking pictures to document the role of alcohol and alcohol advertising in their community as well as potential ways to address the problem. In a guided discussion based on the pictures, the groups prioritized salient topics, identified target audiences to communicate their findings to, and developed strategies to address UAD in their respective communities. Among a large number of themes, the negative influence of adult family and friends on their attitudes toward UAD came up consistently. Youth were very interested in communicating their thoughts and pictures about UAD to their parents, school officials, churches and others. They developed specific strategies and projects to increase awareness about UAD and/or to change local environments to minimize alcohol exposure. The recruiting community agencies were given an opportunity to apply for small grants to follow through with some of the youth-suggested projects. This study indicates that PhotoVoice is an excellent tool to engage youth in the topic of UAD prevention. The youth were highly receptive to the topic and very engaged in developing solutions that directly affected their own living conditions in their communities.

SP-222

Conditions of Happiness that People Come Together Creative

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Abstract Chaiyaphum Province. Thailand. Survey data from state health. Found that chronic patients. 8.76%. Of patients. The elderly at risk of chronic disease 6.02. % Because the elderly. Many must live with chronic disease conditions. Seniors who are home alone does not care. Using the exchange of learning in meeting the search Learning problems and health needs of the elderly. Cause a process of social capital and development. Design activities and health care help the elderly . Innovation. With the goal of the filter. Assess health conditions and the elderly. Search the elderly healthy. The process of creating shared goals between the organizations. Party. From the meeting. Reflect the involvement of corporate partners. Public health officials. Also Conditions of happiness that people Together

SP-223

Words Act – Speech Violates

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Widespread common sense states, that words and speech are non-persistent, non-physical and don't leave a mark. Contrariwise discussion has been ongoing for decades (Kuch 2007; Butler 1998; Bourdieu 2005). Words can discriminate, humiliate, violate and scare. Speech, at the end of the day, is action, creates social facts and determines scenarios of world views (Habermas 1995; Searl 1997). Every day communication in health systems is a marginalized venue of discriminating, humiliating, scaring interaction between involved patients and health experts, often mirroring asymmetries in society (Graumann 1998). The functional approach of Graumann/Wintermantel (2007) describes such discriminating acts of speech in professional practice.

SP-224

The Quality of Collaboration among Medical Research Centers, Universities, Health Executives and the Community in Iran

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managers is also weak, especially in knowledge utilization and priority setting. It is concluded that the policies of medical research centers should be reoriented towards the basic health problems of the country facing executive organizations as well as the community. The collaboration between RCs and the universities, the private sector and NGAbstract: A health research system is defined as a system for planning, coordinating, monitoring and managing health research resources and activities, and for promoting research aimed at effective and equitable national health development. This study was conducted to describe the quality of mutual collaboration among medical research centers, universities, executive organizations and the community. In this situation analysis qualitative methods were applied. In-depth interviews were held with the heads of 20 research centers (RCs), 6 senior executive health

administrators at national level, 10 vice chancellors at universities and 3 directors of private medical research firms. In addition to the interviews, records and evidence were reviewed. The findings reveal that 86% of the RCs' annual budget is secured by public sources. The collaboration among the RCs, universities and organizations is informal rather than formal. The cooperation between RCs and universities in policymaking, priority setting and knowledge production and utilization is stronger than that with other organs. The RCs have weak relationships with the community. About 20% of them have no relations with the private sector. The collaboration of RCs with the executive organizations andOs should also be reinforced through networking and improvement of health information systems

SP-225

Application of Involvement to Comsumers' Perspectives and Service-Seeking Behaviors of Bariatric Surgery

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Evidences showed Bariatric surgery as an effective procedure to deal with morbid obesity. In addition, the procedure has become one of services introduced to self-pay market by health care provider in order to confront the financial stress. The aims of the study are to apply involvement theory to explore the consumers' opinions on bariatric surgery and decision making behaviors in seeking bariatric surgery. The study data is collected by a structured questionnaire. The questionnaire was composed of three major dimensions including personal characteristics, services seeking behaviors, and involvement scale. A total of 124 study subjects were selected by a non-probability sampling... There are three factors identified by conducting a factor analysis. The factors include meaning to individual, meaning to social life, risk of service. The value of Body Mass Index and personal satisfaction to body weight were the personal factors that influenced the involvement level. The interviewees view the product characteristics of the bariatric surgery as fastest effect, less body weight regaining, and expensive. It was found that the consumers with high involvement level were more willing to receive the service. Through logistic regression, it was forecasted that the meaning to individual and the value of Body Mass Index were the major factors for the consumers to receive bariatric surgery. The results provide important information to providers to understand potential consumers' perception of bariatric surgery.

SP-226

Bibliometric Analysis of Biobank Literatures in the 1991-2008 Period

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The increasing numbers of publications on biobank indicate its increasing importance in the world. This study was done to quantify the scientific publications of biobank, and leads more comprehension about the trend and scope of utilization of biobank area.
Method: The documents were based on Science Citation Index (SCI) which was accessed from the ISI Web of Knowledge during the period of 1991 to 2008. Total 403 publications were analysed by the including variables: document types, page count, authorship, reference count, journal, author keywords, subject category and country of publication.
Result: Of all publications, 229 (57%) were articles, followed by meeting abstract, editorial material, news item, and review. Most articles were published in English (96%), and the UK (United Kingdom) was the most publication country (28%) and followed distantly by US (24%) and the Sweden (21%). The most frequently used author keywords were 'biobank' and followed by 'informed consent', and 'genetics'. International Journal of Epidemiology was the most active journals with the number of publications.
Conclusions: The number of articles increased over 40-fold from 2002 to 2008, with a similar increase in total pages. The production was dominated article, by UK, published in English, and International Journal of Epidemiology.

SP-227

Determinants of Patients Satisfaction on the Hospitalization Experiences

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Background: Understanding patient's needs, preferences and expectations towards the health services through their perspective is important in improving the quality of the health services. Measuring patient satisfaction is therefore one of the many popular tools to measure and monitor health services in terms of the quality.
Aims: The study aims to identify published instrument to measure patient satisfaction for hospital stay experiences.
Methods: Searches were performed in various databases using keywords such as patient, satisfaction, needs, preferences, expectations, hospitalization, in-patients, or hospital stay.
Results: A total of 3 validated instruments were found from the United Kingdom (UK), United States (US) and Australia. Aspects from 3 instruments were similar and all of them included accessibility, physical environment, communication, interpersonal relationship and discharge

information. The one from UK further emphasized the care coordination and continuity from hospital to community; while the US one included pain management and the Australia one highlighted the mechanism of complaints management. All of these 3 instruments are now used in regular patient satisfaction survey exercise in general in-patients and will be further developed for special groups including obstetrics cases, palliative cases, and cases with mental diseases.
Conclusions: A standard and validated patient satisfaction survey tool is very important for service quality improvement; however, there is no such centralized and validated survey being conducted in Chinese population, including Hong Kong. The next step of this study is to develop a validated instrument through qualitative and quantitative study in Hong Kong and conduct a benchmark survey.

SP-228

Awareness of the Senior Citizen's on the Physical Restraints in Okinawa, Japan

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The enlightening activity should be necessary to prevent the physical restraint. This study aims to reveal the awareness of the senior citizen's on the physical restraints. Senior citizens are 167 people who execute the questionnaire survey by the mailing method of the senior citizen club of 44 districts in 41 municipalities in Okinawa prefecture and obtained. As a contrast, we chose 93 non-medical faculty student and 189 health science department students. The survey was carried out with a questionnaire of J-PRUQ capable to measure the score of physical restraints. The score obtained were widely ranged from 17 to 83. It means that the more the score, the less aware of physical restraints. The average score of J-PRUQ was senior citizen was 54.9±12.8, non-medical faculty student 54.4±11.6, health science department student 49.3±11.0, and a senior citizen and non-medical faculty student had significant higher than the health science department student ($p<0.001$). When asking it, "Has the word elderly abuse been heard?", "Does it know the law that prevents the elderly abuse?", "Does it know the physical restraint prohibition regulations?", the difference was not admitted in J-PRUQ in the answer of each group though a significant difference was seen. As for the senior citizen, 49.5% knew the physical restraint prohibition rule of the elderly abuse prevention law only by 24.6%. The enlightening activity that can be correctly understood about the cruelty prevention law and the physical restraint prohibition regulations to the general population is requested.

SP-229

Adolescent Sexuality and Childbearing in Chinese Societies

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Introduction: Following fast westernization, both Chinese societies and the lifestyles of Chinese have changed quite a lot in past decades. Among which, the adolescent sexuality is particularly concerned by educational as well as health care community..
Methods: Collected from official websites and literature, sex knowledge, sex attitude, and dating and sexual behaviors of the adolescents in Taiwan, Hong Kong and Mainland China are analyzed and compared one another.
Results: The results showed that in Hong Kong, 40% of the adolescents in the first and second grade year of junior high school had a dating experience , while 60% of students in the second and third grade year of high school did. An investigation from Mainland China shows that sexual practice occurred in 32% of teenage males and 12% of teenage females who were in love. However, only about one thirds of teens used contraceptives during their first time sexual practice, no matter in Taiwan, Hong Kong or Mainland China.
Based on a national survey in 2000, among the adolescents aged 15-19 years old, 13.9% of males and 10.4% of females (15-19 years old) in Taiwan claimed that they have had sex experience, while up to 30% of the adolescents in a metropolitan city of mainland China experienced sexual intercourse. The fertility rate for women aged 15-19 years old was 8/1000 in Taiwan, much more higher than that of 4/1000 in Japan and 2/1000 in Korean.
Conclusions: In Taiwan, Hong Kong and Mainland China, the adolescents showed a poor sex knowledge but an open sex attitudes and behaviors in terms of dating and unmarried sexual practice without safe contraception which then resulted in a high rates of unexpected pregnancy and childbearing. All these warn us to be much active in having more effective prevention and management plans on adolescent sexuality, through a comprehensive sex education, empowering teens self-efficacy and providing friendly adolescent reproductive health services.

SP-230

Women's Health after Childbirth: Experiences of Immigrant and Australian Born Women in the First Three Months Postpartum

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Objective: To investigate differences and similarities in the postpartum health status of mothers born overseas of

non-English speaking background (NESB) compared with Australian-born mothers.
Methods: Prospective pregnancy cohort study conducted in Victoria, Australia. Analyses are based on questionnaires completed in pregnancy and at three months postpartum.
Results: 1507 nulliparous women enrolled in the study (mean gestation = 15.3 weeks); 95% completed follow-up at three months postpartum. Immigrant mothers of NESB (n= 243) were more likely to have a low income, and higher educational qualifications than Australian born mothers (n =1,115). Women in both groups had similar obstetric characteristics and postpartum physical health outcomes. Immigrant women were more likely to say they had been depressed for two weeks or longer since the birth (OR =1.89, 95% CI 1.3-2.7); to report relationship problems (OR= 1.26, 95% CI 0.9-1.8) and to report lower emotional satisfaction with their relationship with the partner (OR=1.58, 95% CI 1.1-2.3). Immigrant mothers were less likely to be asked about feeling low or depressed by general practitioners (OR=0.69, 95% CI 0.5-0.9) and about relationship problems by maternal and child health nurses (OR=0.67, 95% CI 0.5-0.9).
Conclusions: Immigrant women of NESB reported greater psychological distress, less emotional satisfaction with their partner and more relationship problems in the first three months postpartum than Australian born women. Immigrant mothers had an equivalent level of contact with primary care practitioners in the first three months postpartum, but were less likely to be asked about their emotional well-being or about relationship problems.

SP-231

Coping with Infertility …. Marital and Social Life Experiences of Sri Lankan Women with Primary infertility

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Introduction: Infertility threats the marital relationship which transforms an individualized health problem into social suffering. These consequences are likely to be greater in developing nations, where motherhood enhance their status within the family and community. This study described the impact of infertility on marital and social relationships of infertile women and the coping mechanisms adopted by them in the Sir Lankan setting.
Method: In depth interviews with 30 randomly selected (of the women identified in the community prevalence survey) primary infertile women were carried out using a systematically developed pre-tested interviewer guide where all the selected informants responded.
Result: Infertility had resulted in a strained marital relationship when their initial relationship was not very stable. Their closeness to each other, intimate communication was affected while some had been abused, physically and verbally by their partners. For couples who talked to each other openly, this had been another problem in life keeping the relationship alive. The sexual relationships were affected in some. The relationship with own parents/ siblings was not usually affected but that with in-laws especially had they lived in the same household. Some were forced to divorce and excluded from family inheritance. The coping strategies adopted by them were continuing with the busy life schedule, continuing with treatment, adoption, avoiding relatives, friends and neighbours and accepting a childless life.
Conclusions: The marital and social lives of some primary infertile women were disrupted while they were trying to cope up with infertility adopting different measures.

SP-232

Health Care Seeking of Women for Delay in Child-Bearing in Sri Lanka

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Introduction: Despite the great advancements, availability of infertility services range from non-existent to virtual oversupply while utilization of available infertility services too varies due to cultural and socioeconomic differences between countries and regions. This described the health care seeking behavior of infertile women in Sri Lanka.
Method: Primary (n= 177) and secondary infertile (n= 329) women identified through community prevalence study were administered pre tested questionnaires by the interviewers.
Results: Health care seeking for infertility was 52.6 % while significantly ($p<0.001$) high proportion of primary infertile been ever investigated/treated (78.5%). Primary infertile couples had commenced treatment with a shorter waiting time (mean=22.91, SD = 24.90 months) and continued for a longer period (mean=31.17, SD=27.84 months), trying more methods (mean=2.56, SD=1.21) compared to secondary infertiles (61.4%, mean=26.61 SD=19.15 months, mean=18.91 SD= 20.69 months, mean=1.64 SD=0.79 respectively). Of who sought care (n=266), the majority (n=143) had opted for both medical and non-medical modalities. The most preferred sequence was from private allopathic to private allopathic to religious methods. The main reasons for discontinuing treatment were fed up with treatment and husband's unwillingness/fear of investigations. The main reason for not seeking treatment were 'too early to go for treatment' (n=21) and 'wait and see since there were

previous conceptions' (n=144) among primary and secondary infertile couples respectively.
Conclusions: Approximately half of the infertile couples were not seeking treatment. Main reason for treatment discontinuation was male partner related while not seeking help was time related.

SP-233

Psychological Well- Being and the Associated Factors of Primary Infertile Women in Sri Lanka

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Introduction: Primary infertility has a considerable impact on the psychological well-being of the female partner of a couple and studying of which would assist in providing better care for them. This study compared the psychological well being of primary infertile women with a group of fertile women and identified some demographic, treatment as well as infertility related marital and social factors associated with it.
Method: Psychological well-being of 177 primary infertile women identified in a community prevalence survey in the Colombo district, Western Province, Sri Lanka and 177 controls matched for age and duration of marriage was evaluated using the GHQ-30. A pre-tested questionnaire was used to obtain other related information. Odds ratios and logistic regression analysis was used to identify relationships among infertile women.
Results: A significantly higher proportion of primary infertile women (66.1 %; 95%CI 59.14-73.06) had psychological distress as compared to fertile women (15%; 95%CI 9.75-2-0.25) ($p<0.001$). After controlling for other variables, primary infertile women with a lower educational status (OR=55.34; 95%CI 15.23-201.06), poor marital communication (OR=3.45; 95%CI 1.22¬9.75), higher priority for having children (OR=4.18; 95%CI 1.25-13.82), previously investigated/treated for infertility (OR=39.11; 95%CI 8.25-185.41) or currently investigated/treated for infertility (OR=10.99; 95%CI 2.98-40.61) had a higher risk for being psychologically distressed.

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