

Poster Session I

FP-001

Simple Approach to Measure Economic Burden 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 Subdistrict. 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 trial 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% ($R^2_{adj} 0.171$). 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 were 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 ($OR=3.43$, $95\%CI=1.61\sim7.31$), hematocrit ($OR=0.89$, $95\%CI=0.81\sim0.99$) and ICA diameters ($OR=2.54$, $95\%CI=1.21\sim5.34$) 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

Tanida Phatisena

Dr. Samnao Phatisena, Thailand

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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The Chinese University of Hong Kong, Hong Kong

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 Ratchasima College on Student Learning Centre Approach **Sutasinee Ungsoongnern¹, Kraichat Tantrakarnapa², Jira Kaewdam¹**

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2. Mahidol University, Thailand

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 Technology, 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****Ping Liu***Kunming Medical University, China*

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****Sakura Kinjo, Minoru Takakura***University of the Ryukyus, Japan*

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. Data 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****Dadun¹, Purwa Sucahya²***1. Faculty of Public Health Universitas Indonesia, Indonesia**2. CHRUI, Indonesia*

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

Byunghwa Lee, Young Moon Chae
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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 emphasizes 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 health informatics competency in MPH course.

FP-034

Peace through Health; An Example from Sri Lanka ***Chamara Berugodaarachchi¹, Isurujith Liyanage², Shashimali Wickramasinghe¹, Rifzan Jameel³, Indika Karunathilake¹***

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2. University of Colombo, Sri Lanka

3. Ministry of Health, Sri Lanka

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 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-ethnic team-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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International Medical University, Malaysia

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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University of the Philippines Manila, Philippines

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**

Ridwan Amiruddin

Hasanuddin University, Indonesia

Bird flu or Avian Influenza is contagious disease caused by type A influenza virus transmitted by poultry. In Januari 2004, cases were reported occurring 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' knowledge of and attitude toward the occurrence 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 occurrences of avian influenza and the poulterers' 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**

Ridwan M Thaha

Hasanuddin University, Indonesia

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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Mae Fah Luang University, Thailand-Government Organization, Thailand

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 be 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, (July 2, 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 Tamiflu. 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

Herng-Chia Chiu, Chao-Sung Chang, Ya-Ting Kung
Kaohsiung Medical University, Taiwan

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

Seon-Ju Yi

Seoul National University, South Korea

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 billion 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/ gastrintestinal 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

Jyotsna Rimal, Ashish Shrestha

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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

Yoko Aihara, Yuki Kikuchi

Nagoya University, Japan

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 χ^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+6.5 years) 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 conducted 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 ($p\text{-value} \leq 0.00$) and who had received OI presented 50% survival time at 5.99 years ($p\text{-value} \leq 0.00$). 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 epidemic. 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 nutraceuticals in broader term must remain as component of food rather than individually as capsule or in other forms. There is increasing evidence that sulfur amino acids (SAA) play an important metabolic and functional role in human health and disease prevention. It is further observed that SAA also provide elemental Sulfur required 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 various 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 improve 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 youngsters 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 injuries, 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. Forty percent of the injured cases were to arms and limbs, 29,8% to scalp and 24,1% were musculoskeletal injuries. Many less serious injuries were not registered 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 than 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 than 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 Health 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 (from 7.9 to 2.2), the age 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. Men 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 National 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 ***Li-Chun Chang¹, Heng-Chia Chiu², Hui-Ying Cheng¹***

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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 morale 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 Health 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, there is no differences of birth weight (3040g) Conclusion, 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 **Anurasiri S. J. Jayasinghe¹, Samath Dharmaratne²**

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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 **Oyuntsetseg Jagdaq¹, Zolzaya Jalbuu¹, Narmandakh Battulga¹, Enkhzaya Batnasan¹, Ganchimeg Ulziibayar²**

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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 miscarriage 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 disease. 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 abservational 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 questionnaire 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 consumed 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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Objective: A pilot study of the influence of growth reference charts on breastfeeding rates.

Methodology: Breastfeeding is the foundation of infant nutrition and lifetime health. Exclusive 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 9.75-20.25) ($p < 0.001$). 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 exercised 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 addictive 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 cortisol interleukin – 6 and tumor necrosis 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, TNF α 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 decreased 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 than 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 find 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 amount of fund needed for this additional health insurance (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 Government HI) of Rp120.000/person/year, the program then needs Rp4.963.320.000. annually. 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 health 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 $\geq$ 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 (SEA) 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 ≥ 18 years 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 month 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 care. 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 unemployment 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 multifactorial 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 residential 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 from bivalves that called "sate kerang" (cockle 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, PM_{2.5}, 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 FEF_{50%}, FEF_{75%}, and FEF_{25-75%} 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 than 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 become a determinant factor for malaria, since cases were 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 Srirakul Vittaya School, Thailand

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Objective: To implement solid waste segregation promotion program (WSPP) in Srirakul Vittaya School, Thailand and to study the difference of sample group's knowledge, attitude and practice (KAP) towards solid waste segregation before and after WSPP.

Methods: The samples were 192 students in Srirakoolvittaya 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 WSPP 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 WSPP, 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 WSPP 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, Triglyceride 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 relationship with coefficient 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 $<1\mu\text{g}/\text{m}^3$ to $768.88\mu\text{g}/\text{m}^3$). Median blood lead levels for exposed and non-exposed workers were 11.10 and $9.45\mu\text{g}/\text{dL}$ 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 ($\geq 12.2\mu\text{g}/\text{dL}$) 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 ($\leq 8\mu\text{g}/\text{dL}$) 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: $0.0\sim 0.5$; $p=0.03$) 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 dysmenorrhea 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: $1.23\sim 4.59$), 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 irradiated TiO_2 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 TiO_2 dose. MDR bacteria required TiO_2 doses of $1,004\sim 1,823$ and $1,829\sim 3,436$ ($\text{mg} \times \mu\text{W} \times \text{min}/\text{ml}\cdot\text{cm}^2$) for 90% and 99% inactivation, respectively. In addition, the TiO_2 dose for 99% inactivation was nearly 2 times higher than that for 90% inactivation. In comparison with other microbial species, we found the required TiO_2 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 TiO_2 . In summary, TiO_2 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 29,9° 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 ($p = 0,001$) and there is also a relationship between the exposure duration to work environment temperature and the uric acid concentration in workers' urine ($p=0,021$). 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 ***Ching-An Feng¹, Da-Ji Hung², Ching-Chang Yang¹***

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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 (Risksdas) 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 hypertension ($OR\ 1,46$ $CI(95\%) = 1,394-1,521$; $p=0,000$). 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 hypertension. 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 **Ho-Cheng Chen¹, Min-Wen Chen², Chin-Huang Hung^{1,2}, Chien-Hsiung Lin², Hsiu Chen Huang²**

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2. Chiayi Christian Hospital, Taiwan

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 **Chyi-Huey Bai¹, San-Lin You², Chien-Jen Chen², Chien-An Sun³**

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3. Fu-Jen Catholic University, Taiwan

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 activities: Kissing, Necking, Petting dan Intercourse (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 known 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 $\alpha = .05$. 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 $.05$ ($r=0.519, 0.61$). 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, advocacy, and the balance between budget items and the local income through a transfer of Public Allocation Fund.

Conclusion and Recommendation : We conclude and recommend that Health Office of Gorontalo Province should improve the ability in planning the health budget management through advocacy, and should establish a priority scale of program activities based on the compulsory 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 $\pm$ 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 experiencing 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 community 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 satisfaction 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 behaviour of street boys in Makassar about alcoholic beverage. This research is a qualitative research 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 strengthen 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 entertaining 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 government 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 and 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 Phiboonmangsaan 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 health 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 domestic chores 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 tended 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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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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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 ratios 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 Jayawardenapura, 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 signs 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

Ling-Ling Yeh, Yue-Shan Tsai

Asia University, Taiwan

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 **Ling-Ling Yeh**

Asia University, Taiwan

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? **Hsiang Tsuei, Kun Yang Chuang**

Taipei Medical University, Taiwan

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-off score 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 Partner 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 multivariate 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) conducted 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, pre-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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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 advocacy 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.

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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.

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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.

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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 tended to have significantly higher appraisal of the communication behaviors between patients and their physicians. Patients who were females and whose physicians were more experienced tended 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.

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Relationship among the Hospital/Physician's Characteristics, Process of Care and Outcome in Curative Therapies for Patients with Hepatocellular 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.

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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 quantitative methods were used. The studies aimed to provide the information on factors affecting newborn care practices among mothers in rural community of Doti (far western region) and Dalit (most disadvantaged ethnic 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.

mandatory for rheumatoid arthritis patients for better individual and family life and society as a whole.

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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