

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.

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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 residentials of Myanmar migrants were mainly apartments belong to the private sector. The results indicated that the major problems of environmental health among Myanmar communities were solid waste, wastewater management, housing sanitation and vector control. Most of them accessed and used water supply (99%) and the bottled water was used as drinking water. Regarding the health problem, the majority was common cold 35 cases of 85 (41.2%); the second rank was muscle pain (14.1%). Most of the respondent reported that they preferred to use the services of private clinic, 36 of 85 cases (42.4%). Concerning the personal hygiene, it was recorded that approximately 96% of respondents answered that they always washed their hands before eating and cooking. Approximately 89% washed their hands after toilet. Then the proportion of food and water borne diseases were not mentioned from the respondents. Regarding the housing ventilation, it was observed that almost of house particularly bed room, the ventilation was very poor, and only 71.3% have sufficient ventilation. Some house did not have any windows, only door was provided since the limitation of their wages.

FP-129

Comparison of Cadmium Concentration, Protein and Organoleptic of Bivalves After Soaked on Vinegar Solution

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Surabaya and Sidoarjo, Indonesia, has special food made from bivalves that called "sate kerang" (cokle 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