

# APRU



## 2015 GLOBAL HEALTH WORKSHOP

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## ABSTRACTS

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**October 31, 2015**

## **ABSTRACTS FOR ORAL PRESENTATIONS**

### **Concurrent Panel I: Maternal Health**

**AUTHOR(S):** Jaime Javier Cantú Pompa

**UNIVERSITY:** School of Medicine of Tecnológico de Monterrey, Campus Monterrey.

**TITLE:** Transversal comparative study of newborn morbidity in teenage pregnancies in a hospital of Nuevo León, México

**ABSTRACT: Introduction:** Teenage pregnancy is considered has a health risk for both mother and product. This work aims to compare the incidence of teenage pregnancy (age less than 19 years) against adult pregnancy (more than 19 years). This work also compares pregnancy outcomes comparing very young adolescent mothers (less than 16 years) and adolescent mothers (16 to 18 years) against adult pregnancy. Thought this comparison this paper recognizes if teenage pregnancy poses a health risk for the child. **Material and methods:** A retrospective, transversal and comparative study was implemented. The population of study was the total of childbirths of the Metropolitan Hospital "Dr. Bernardo Sepúlveda" during the period of January 1 to December 31 of the year 2009. Data was gathered from clinic registries. The variables obtained were: occupation and scholarity of the mother, prenatal control, and maternal pathology during gestation, birth weight, and gestational age of the product, mortality perinatal, admission to neonatal intensive therapy and death of the product. The odds ratio was calculated using adult mothers has a control group. **Results:** The children of teenage mothers does not have an increased risk for being premature, low birth weight for gestational age, being admitted to neonatal intensive care or to die. **Conclusions:** The children of teenage pregnancies do not have an increased health risk against the children of adult pregnancies.

**AUTHOR(S):** Josefina Santos

**UNIVERSITY:** University of Philippines, Broadcast Communications Department

**TITLE:** Empowerment through well-informed pregnancy

**ABSTRACT:** Childbirth is a wonderful experience for the parents, the child and their families. However, in the 1990s, infant mortality in the Philippines was at 80 out of every 1000 births. Because of programs adopted for its medium development goal, death among children below 5 years old has dropped to 30 in 2011. While there is cause to look positively at these developments, maternal deaths increased to 221 in 2011 from 162 in 2006. Those deaths could have been avoided since most of the reasons for mortality could have been addressed since most of the women die due to pregnancy or childbirth complications. To empower women regarding the proper care of the bodies during pregnancy, at childbirth, after pregnancy and if possible, before pregnancy, several projects have been initiated by the government and private sectors to encourage community participation to deliver healthy babies and avoid maternal and neonatal as well as infant mortality in priority areas in the

Philippines. Among the projects are the “Adopt a buntis (pregnant woman)” project where pregnant women are given maternal care and nutrition in return for participation in livestock raising and tending vegetable gardens in the community. Another project is the “Buntis Congress” where teenage would-be mothers are given the opportunity to learn about their bodies, their conditions and the experiences of women during and after pregnancy. A third is a private company initiated project to provide lying in facilities for pregnant women as an alternative to childbirth in the urban slum setting.

**AUTHOR(S):** Junfei Guo

**UNIVERSITY:** Fudan University, School of Public Health

**TITLE:** A systematic review of lessons learned on breastfeeding interventions in China

**ABSTRACT: Rationale:** The health benefits of breastfeeding (BF) to children have been widely recognized, and China has promoted nationwide interventions to support BF since the early 1990s. **Objectives:** This systematic review synthesized the existing literature on BF interventions and summarized the lessons learned from China’s experience. **Methods:** A total of 7 articles discussing 6 interventions (1 cluster-RCT, 3 quasi-experimental designs and 2 prospective studies) were identified through a literature search. 6 in-depth interviews with key informants were conducted for further information. **Results:** The main nationwide BF intervention was the Baby Friendly Hospital Initiative (BFHI) launched by the government in 1991. Various regional interventions on maternal education, healthcare professionals (HCPs) training, primary care, postpartum telephone call, peer counseling have also been available since the 1990s. Educational interventions for HCPs and mothers were significantly correlated to an increased BF rate and/or duration. However interventions directly for mothers or for both health professionals and mothers seemed more effective than for HCPs alone. Despite its success, BFHI declined due to mismanagement. Barriers identified were, poor supervision of breast-milk substitute marketing, poor management of Baby Friendly Hospitals (BFHs), and unsupportive workplaces. Ultimately, the major challenge is to maintain a sustainable and supportive social environment for BF mothers. **Discussion:** This is the first attempt to summarize the existing interventions for BF support and is a valuable basis for future BF support in China. The findings may also be appropriate for countries with health care systems and BF rates similar to those in China.

**AUTHOR(S):** Nguyen Thanh Ha, Le Minh Thi, Luu Thi Hong, Dinh Thi Phuong Hoa, Bui Thi Thu Ha

**UNIVERSITY:** Hanoi School of Public Health

**TITLE:** Assessment of barriers to implementing the baby-friendly hospital model to improve initiation of breastfeeding in Vietnam

**ABSTRACT:** Initiation of breastfeeding in the first hour and exclusive breastfeeding for the first 6 months of life are global public health goals aimed at reducing infant morbidity and mortality. Lessons learned from China’s successful Baby Friendly Hospital Initiative (BFHI) have the potential to benefit breastfeeding interventions globally. Vietnam has applied BFHI model since 1992. However, in Vietnam, the rate of initiation of breast feeding in the first hour dropped from 39.7% in 2012 to 26.5% in 2014 . Only 19.6% of infants received exclusive breastfeeding for the first 6 months, the lowest exclusive breastfeeding rate in Southeast Asia. Little is known about which factors prevent initial breast-feeding practices Vietnam hospitals. **Objectives:** 1. to determine proportion of breastfeeding initiation in the first hour and exclusive breastfeeding practice during postnatal hospitalization in both BFHI and non BFHI hospitals; 2. to identify barriers to implementing BFHI in Vietnam; and 3. to identify and pilot an effective intervention to increase breastfeeding initiation in the first hour and exclusive breastfeeding

during postnatal hospitalization. **Methods:** A cross sectional survey will be distributed to 2 hospitals and a pilot study to implement a sustainable BFHI model will be tested. **Results and Discussion:** The study findings will identify weaknesses of the current BFHI and non BFHI services and propose an effective model for sustainable BFHI hospitals. The study also shows how lessons learned from the Chinese experience can be applied in Vietnam and potentially similar low and middle income countries.

**AUTHOR(S):** Weibing Wang

**UNIVERSITY:** Fudan University, Department of Epidemiology

**TITLE:** Prevention of mother-to-child transmission of HIV, syphilis and hepatitis in China

**ABSTRACT: BACKGROUND:** Integration of health services for Prevention of Mother-To-Child Transmission of HIV (PMTCT) into routine maternal and child health care is promoted as a priority strategy by the WHO. China has been integrating prenatal HIV, syphilis and hepatitis B testing services since 2009, with full coverage of the service beginning 2015. However, as the individual health systems are complex, effective coordination among different health agencies is challenging. The study aims to assess the effectiveness and challenges of integrated service delivery. **METHODS:** Research was conducted in Guangxi province from Jan 2014 to June 2015, using qualitative and quantitative methods, and systematic reviews of the literature. Data were collected through a survey and routine monitoring for PMTCT, as well as individual stakeholder interviews. **RESULTS:** Between 2009 and 2013, 28 million individuals accepted marriage counseling; 98.37% of them received HIV testing. The HIV testing rate among individuals in the marriage registration increased from 96.8% in 2009 to 100% in 2013. Over 1000 infected cases were detected annually by the intervention, including 500-600 women. As a result, the mother-to-child transmission rate for HIV decreased from 3.7% in 2008 to 2.9% in 2013 in Guangxi. Interviews confirmed the role of early screening detection. **IMPLICATIONS for LMICs:** Multi-departmental coordination is a key factor for the success of China's PMTCT program. Our recommendations for LMICs include: 1) Facilitate integration of the funding and information systems; 2) Establish regular meetings to facilitate exchange of information; 3) Establish a client referral network; 4) Reduce the price for the package.

**AUTHOR(S):** Nenita Panaligan

**UNIVERSITY:** Cavite State University, College of Nursing

**TITLE:** Lived experiences of the Mangyan mothers in their infant care at home

**ABSTRACT:** Despite the obvious appeal to better educate mothers, in all locale and settings for the challenging role of providing essential infant care, few data are available to characterize the views and experiences of minority groups, in particular the Katutubong Mangyan in Occidental Mindoro. Mangyan mothers' lived experiences in taking care of their infants at home is an explorative area about mothering. This study is a qualitative research study, aimed to discover process involved in Mangyan mothers experiences for infant care. This study focused on Mangyan mothers' different subjective statement about the phenomenon that mothers are experiencing specifically with 1 day to 12 months old children on the perspective of comprehensive and holistic care. This study is a descriptive type of qualitative research specifically using phenomenological approach. There were 88 significant statements, each having a corresponding formulated meaning. The significant statements were placed into categories represented by the six themes that describe the essence of the experience of providing infant care by these mothers such as: *\*/M\*/othering/*: an experience of giving life to a little being, *\*/O\*/rienting/*: capturing the elements of mothering\*, *\*/T\*/ouching/*: the mother's hands on caring\*, *\*/H\*/ealing/*: providing the comforting

remedy\*, /E/\*xpecting/: conquering challenges of the experience and \*/R\*/elating/: expressing the mastery in mothering.

## **Concurrent Panel II: Non-Communicable Diseases**

**AUTHOR(S):** Xia Wan<sup>1</sup>, Enbo Ma<sup>2</sup>, Yong Zhang<sup>3</sup>, Hiroyasu Iso<sup>4</sup>, Kazumasa Yamagishi<sup>2</sup>, Hideto Takahashi<sup>5</sup>, Yukiko Wagatsuma<sup>2</sup>, Gonghuan Yang<sup>1</sup>

**UNIVERSITY:** <sup>1</sup>School of Basic Medicine, Peking Union Medical College & Institute of Basic Medical Sciences, Chinese Academy of Medical Sciences, Beijing, China; <sup>2</sup>Faculty of Medicine, University of Tsukuba, Tsukuba, Japan; <sup>3</sup>Center for Chronic Disease Control and Prevention, Chinese Center for Disease Control and Prevention, Beijing, China; <sup>4</sup>Graduate School of Medicine, Osaka University, Osaka, Japan; <sup>5</sup>School of Medicine, Fukushima Medical University, Fukushima, Japan

**TITLE:** Declines in mortality from stroke in China and Japan in the last twenty years

**ABSTRACT: Introduction:** Stroke is part of the core cluster of major non-communicable diseases. The objective of this study was to review the mortality from stroke and to identify the disparities of them between Chinese and Japanese populations in the past twenty years. **Methods:** Death data were from the disease surveillance points and national mortality surveys in China since 1994 and the vital statistics in Japan since 1991. Poisson regression models were applied to fit and predict the trends of mortality from stroke in both countries. **Results:** In earlier 90s, the standardized mortality rate (SMR) in China was 2.6 times higher than it in Japan. In 2010, the SMRs declined to 120/100,000 in China rural area and to 60/100,000 in China urban area, which was 5.8 and 3.0 times higher than it in Japan (22/100,000), respectively. The proportions of stroke deaths among total deaths in Chinese rural areas increased since 1994 and they started to be higher than in urban areas since 2000, particularly in women since 2005. The stroke mortality proportions were steadily declining both in Japanese men and women since 1995. Age-specific mortality of stroke reduced in Chinese urban residents, but did not change much in rural residents between 1994 and 2010. While in Japan, the age-specific mortalities reduced more prominent above 50-year-old, both in men and women. **Conclusion:** It is urgent for Chinese health authorities to enhance and carry out intervention and treatment programs to reduce risks of stroke mortality, particularly for women and those in rural areas.

**AUTHOR(S):** Kuo-Liong Chien<sup>1</sup>, Pei-Chun Chen<sup>2</sup>, Hung-Ju Lin<sup>3</sup>, Ta-Chen Su<sup>3</sup>, Hsiu-Ching Hsu<sup>3</sup>, Ming-Fong Chen<sup>3</sup>, Yuan-Teh Lee<sup>3</sup>

**UNIVERSITY:** 1Institute of Epidemiology and Preventive Medicine College of Public Health, National Taiwan University; 2Clinical Informatics & Medical Statistics Research Center, Chang Gung University, Taipei, Taiwan; 3Department of Internal Medicine, National Taiwan University Hospital, Taiwan

**TITLE:** Validating various Atherosclerotic Cardiovascular Disease Prediction Models from a Taiwanese national representative cohort study

**ABSTRACT: Background:** Evidence from the validation of various prediction models for atherosclerotic cardiovascular diseases was scanty, especially for the cross-ethnic comparison. **Methods:** We applied a national representative cohort study composed of 5434 adults recruited from a national representative sample and undertook a median 9.7 years' follow-up period, developing 212 cases of

atherosclerotic cardiovascular diseases. Three available prediction models, including Framingham general risk model, 2013 American Heart Association/American College of Cardiology proposed pooled cohort risk model and a manually point-based prediction model developed from a Taiwanese community, were compared for their performance measures. **Results:** The area under ROC curve, were highest for the point-based model, compared with other two models: the areas under the ROC curves were 0.882 (95% CI, 0.861-0.902) for the point-based cohort, 0.749 (95% CI, 0.716-0.783) for the pooled cohort model, and 0.740 (95% CI, 0.711-0.770) for the Framingham risk model. In addition, the calibration measures by the Hosmer-Lemeshow statistics were smallest for the point-based model, indicating a best model fitting to the study participants (the chi-square was 15.2 for the point-based model, compared with 54.7 for Framingham model and 310.5 for the pooled cohort model). Using the net reclassification improvement and integrated discrimination improvement testing, we found that the point-based model had a significant improvement, compared with the Framingham model and pooled cohort model (all  $P < 0.001$ ). **Conclusion:** We clearly demonstrated the manually point-based prediction model had a better performance measures in Taiwan and further intervention trials based on the prediction model for primary prevention are warranted.

**AUTHOR(S):** Richard Taylor and Sophia Lin

**UNIVERSITY:** University of New South Wales, School of Public Health and Community Medicine

**TITLE:** Trends in diabetes and obesity in Samoa and Tonga over 30 years

**AUTHOR(S):** Xuezheng Qin<sup>1</sup>, Suyin Wang<sup>2</sup>, Chee-Ruey Hsieh<sup>3</sup>

**UNIVERSITY:** <sup>1</sup>School of Economics, Peking University; <sup>2</sup> School of Software and Microelectronics, Peking University; <sup>3</sup> The Duke Global Health Institute, Duke University Global Health Research Center, Duke Kunshan University

**TITLE:** The Prevalence of Depression and Depressive Symptoms among Adults in China: Estimation Based on a National Household Survey

**ABSTRACT:** China's fast economic growth in the past decades is accompanied by a rapid epidemiological transition from communicable to non-communicable diseases (NCDs). An important yet often neglected NCD is mental disorder, which accounts for 14% of global disease burden but has been paid relatively little research attention in China. This paper uses a nationally representative dataset to investigate the prevalence and correlates of depression and depressive symptoms among the adult population in China. Our results indicate that the prevalence rate of depression, estimated with the Center for Epidemiologic Studies Depression Scale (CES-D), is high (37.9% for depressive symptoms and 4.1% for depression) and unevenly distributed across regions and subpopulations. Specifically, women, older people and those who live in the central / western and rural areas are more likely to be depressed. We also find significant socioeconomic gradients in mental health: higher education and income levels are shown to decrease the likelihood of depression with diminishing marginal impacts. Our results indicate the urgent need for depression prevention and treatment in China (particularly in the economically less developed regions) through the expansion of primary mental health care resources and a reduction of socioeconomic inequalities.

## **Concurrent Panel III: Global Health Education & Technology**

**AUTHOR(S):** Senice So

**UNIVERSITY:** University of Sydney, Office for Global Health

**TITLE:** Universities and the 12-partner rule: Shared experiences in global health education

**ABSTRACT:** International partnerships have become a major component of universities' international engagement strategies. At their best, they bring multiple benefits to both partners in the form of research links, academic mobility, government and agency funding, student exchange and – in the case of health – global health practicum placements. Sutton and Obst (Developing Strategic International Partnerships, Institute of International Education 2011) assert that universities have much to gain from working together, but advise that care is needed to select suitable partners and ensure that partnerships are productive, effectively managed and long-lasting. This presentation will focus on the academic mobility aspect of global health education partnerships, and discuss what currently constitutes best practice in this area. It will consider what steps can be taken to ensure that mobility programs are successful, identify some of the pitfalls to avoid, and examine how university support staff can play an active role in the process.

**AUTHOR(S):** Hsien-Ho Lin

**UNIVERSITY:** National Taiwan University

**TITLE:** Promoting global health education through research: the NTU experience

**ABSTRACT:** The Global Health Center of National Taiwan University was established in 2007 to promote global health education within the university and across the country. The Global Health Center began with a series of courses on global health and creating a global health concentration within the undergraduate program of public health. Through the initial several years of experience it was realized that the goal of global health education can be strengthened through involving students in global health research. I will give a few examples of graduate students who participated in global health research from different fields of public health (environment health, field epidemiology, quantitative science). I will also discuss about the challenges and lessons learned in our experience.

**AUTHOR(S):** Kuen Cheh Yang

**UNIVERSITY:** National Taiwan University, Department of Community and Family Medicine, National Taiwan University Hospital, Hsin-Chu Branch; Department of Family Medicine, College of Medicine

**TITLE:** A new model of global health education: From theory to field: working towards health promotion in Ladakh

**ABSTRACT:** In 2012, National Taiwan University Hospital, Hsin-Chu Branch (NTUH, Hsin-Chu Branch) began a service project at a boarding school in Ladakh, the largest division of Jammu and Kashmir State in northern India. With growing interest in global health among medical students in recent years, we designed a service learning program for NTU medical students. The program aimed to teach students about global health with the support of a multi-disciplinary team of professionals, composed of doctors, nurses, pharmacists, and project managers. The first goal was to foster medical students' competencies in global health. Secondly, the project sought to alleviate the disease burden in Ladakh through empowering locals to address basic health problems. In 2012-2013, the medical team completed health examinations, a nutrition survey, a medical resources investigation and dispensary set-up. In 2014,

the medical students who had completed a 18-week course titled “Global Health and Service Learning” were selected. Students joined the NTUH medical team in conducting health checkups for 600 children and maintained lists of cases for follow-up or referral. Analysis from 2012-2014 demonstrated an improvement in children’s growth after nutrition advice in the second year of the project. Students delivered health education programs such as oral hygiene, hand-washing, simple wound care, and puberty. Students assisted the medical team in training local health workers and establishing dispensaries in three locations. Local health workers’ skills and knowledge were evaluated to ensure the sustainability of dispensaries. Students’ reflection demonstrated personal growth and improvement in clinical knowledge as well as cross-cultural communications skills.

**AUTHOR(S):** Tutik Sri Hariyati

**UNIVERSITY:** Universitas Indonesia, Faculty of Nursing

**TITLE:** Development and implementation of mobile health to improve health awareness among nursing students and their families

**ABSTRACT:** In Indonesia the development of technologies such as mobile phones are very rapidly. The devices such as mobile phone very sophisticated but limited function for improve her/his health. The purpose of research is to develop m-health for increasing health awareness , and evaluated of implementation of m-health. The research method used operation research approach. Samples of this study were nursing student and their family (n=140) and selected by purposive sampling. The data have been analyzed by Correlation Spearment and Wilkoxson. There is a relation between respondents who like technology, easy to adapt with technology with positive perception with development and M-health implementation for health education in community ( $r= 0.34$ ,  $p=0.007$ ) and respondents who have perception for supporting M-health that positively correlated with positive action like forward the education message to their family ( $R=0.57$ ,  $p=0.001$ ). Conclusion: M-health implementation perceived give good benefits towards awareness of health and improving for global health. The success of M-health implementation related to infrastructure availability and adaptability to technology. The process of technology adoption was also affected by community readiness to adopt technology. Benefits of M-health has been demonstrated in so many research, however the M-health implementation in Indonesia still has some problems related to technology skills, technology adoption and infrastructure. During this time, in Indonesia mobile phones are more widely used to communicate and still very rarely used as health education media.

**AUTHOR(S):** Don Eliseo Prisno III

**UNIVERSITY:** University of the Philippines

**TITLE:** Teaching Global Health in the South

**ABSTRACT:** Global health education programs have become very popular in many countries. Within a short span of time, various courses are been offered particularly in Europe and North America. Later on, universities in other regions started to follow as the demand and popularity of global health increased. Modelled after some of the short version of these courses, a certificate course program was developed with the purpose of delivering global health education in developing countries for participants to become critical thinkers of global health issues. Courses were held in Asia (Malaysia, Thailand, Kyrgyzstan, India and Bangladesh) and in Africa (Uganda, Tanzania, Rwanda and Kenya). There is a major enthusiasm in learning global health in all of these countries. For many of them, it is something new and is an eye-opener particularly when considering careers. Course content needs to vary depending on the

participants. For example, lectures may start with global epidemiology or global health theories depending on the audience. Lecture on careers in global health is suited for medical students and young professionals. More senior participants can easily grasp the lectures than younger ones. There is a steep learning curve among the participants. Many of the participants would highly consider careers and advanced education in global health after the course. They find global health a distinct field from medicine and public health.

## **Concurrent Panel IV: Migration**

**AUTHOR(S):** Kai Hong Phua

**UNIVERSITY:** National University of Singapore, Lee Kuan Yew School of Public Policy

**TITLE:** National health systems and migration in Asia - Social and economic costs

**ABSTRACT:** This is part of a comparative study “ASEF Public Health Network – Joint Research on Health and Migration in Asia and Europe”, which used a mixed methods approach to create a preliminary knowledge base to analyze the costs of excluding undocumented migrants in Europe and migrant workers in Asia from healthcare. The study aims to examine policies in the selected jurisdictions related to migrants’ and migrant workers’ health to describe the nature of exclusion. Stakeholders are mapped to establish key actors that have an interest and can influence the state of exclusion and healthcare service provision. Micro-cases are then used to estimate the costs of exclusion. A growing interest on the intersection between migration and healthcare emanates from social and economic issues pertaining to the lack of access of migrants to healthcare. Despite making access to healthcare a basic human right, approaches of each country to include migrants into the healthcare system significantly varies. In Asia, countries are concerned over whether exclusion of migrant workers from healthcare will generate social costs and negative externalities that can be detrimental to their continued growth. This comparative study seeks to contribute knowledge on this neglected area of research by estimating the costs related to different levels of exclusion of migrants to selected case studies of healthcare systems across Asia and Europe.

**AUTHOR(S):** Yut-Lin Wong, Shanthi Thambiah, Denise Spitzer, Siti Sa'adiyah Hassan Nudin

**UNIVERSITY:** University of Malaya, Social & Preventive Medicine Department, Faculty of Medicine

**TITLE:** Global migration & health care navigation by female migrant workers: “To sink like a stone or float like a husk”

**ABSTRACT:** Amidst the current global migration, Malaysia is host to thousands of female domestic workers (FDW) from Indonesia, the Philippines, Vietnam, and other low income countries in the Asia-Pacific region. FDW have limited access to formal health services. This paper explores the global health issues, inequalities, and vulnerability experienced by FDW. Fifty-four FDW (30 Indonesian and 24 Filipino) were purposively sampled and mixed data collection methods were applied. Structured questionnaire survey on out-migration process, socioeconomic background, work conditions, and health issues was conducted, followed by indepth interviews. Informed consent was duely obtained. 14% of Indonesian and 11% of Filipino workers felt that their health status had declined. However, post-migratory stressors were evident: headaches (the most common), insomnia, gastric, hypertension, and

menstrual problems. In-depth interviews revealed FDW depended on their employers to access formal healthcare. Half of respondents had health insurance paid by their employers. Among those without insurance, 17 reported that their employers paid for them. Twelve respondents paid themselves. FDW thus coped through self-care: trying not to worry, practising patience, refraining from anger or unpleasant thoughts, and traditional medicine. FDW are trying to navigate chequered pathway in a health system that has not fully integrated migrant health. FDW have to rely on coping strategies and the resilience borne out of their vulnerable conditions, viz. trying to float and not sink. The health system needs to address specific migrant health needs in standardized contracts for FDW between migrant sending and receiving countries, towards rights-based migration health model.

**AUTHOR(S):** Mat Lowe

**UNIVERSITY:** National Taiwan University, Institute of Health Policy and Management

**TITLE:** Decision to migrate versus intention to stay: a qualitative interview-based study of West African health professionals

**ABSTRACT:** Aim: To identify reasons leading to decision to migrate versus intention to stay among West African health professionals. Methods: Qualitative interview-based approaches with purposive sampling were used. Data included 15 semi-structured interviews with health workers from the West African Health Organization Young Professionals Internship Program. Key informants interviews were also conducted with the management team and trainers of the program. The interviews were recorded and transcribed verbatim. The data were coded for patterns of migration. The narratives of the participants were reflected into the main themes. Results: Six themes emerged from the data. Of these, three suggested reasons for potential emigration decisions of West African health professionals. These included: lack of opportunities for continuing professional education, poor working conditions, and salary. Three other themes suggested reasons for intention to stay to include availability of job placement and conflicting family responsibilities. Political instability and fear of HIV infection were also not explicit deciding factors for emigration. Conclusion: Political instability and fear of HIV infection were not revealed to be explicit reasons for emigration. This perhaps is suggestive of the relatively stable political situation and the generally moderate levels of HIV prevalence rate in Western Africa compared to "AIDS belt" countries in eastern and southern Africa. The finding, whilst not generalisable, echoes the need for active recall, recruitment and retention policies as ways to maintain sustained and balanced human resource for health workforce in the region.

**AUTHOR(S):** Paula Tavrow<sup>1</sup> and Mellissa Withers<sup>2</sup>

**UNIVERSITY:** <sup>1</sup>University of California, Los Angeles, Fielding School of Public Health; <sup>2</sup>University of Southern California, Institute for Global Health

**TITLE:** Traffickers' strategies to keep women mentally enslaved

**ABSTRACT: INTRODUCTION:** Trafficking people for labor, not sex, is under-reported and under-investigated worldwide. Many labor-trafficked people are not physically restrained, but traffickers engage in psychological manipulations to keep them enslaved. A 2012 government report from California recorded 1277 survivors over two years, of whom 44% were trafficked for labor. Of those trafficked to California from outside the U.S., the top three origin countries were: Mexico, Thailand and Philippines. In this presentation, we will present the case of a woman trafficked from Philippines to Southern California, and will discuss how the trafficker kept her in servitude for 2.5 years and implications for policy-makers. **METHODS:** After participating in a focus group discussion of

trafficking survivors, Angela volunteered to participate in a videotaped in-depth interview to explain more fully what had happened to her. This presentation intersperses clips from her interview with analysis by the researchers. **RESULTS:** The trafficker used deliberate methods to manipulate and intimidate Angela, such as threats, false information about Americans to create fear, promises, and surprise monitoring. On her part, Angela developed various coping mechanisms--such as numbing out and counting her days--which allowed her to survive but may have inhibited her from getting help. Eventually, a vigilant neighbor alerted the FBI and Angela escaped. **CONCLUSIONS:** It is important to deconstruct the psychological manipulations of traffickers and understand how they can interact with victims own coping strategies to keep trafficked people enslaved. Building awareness of traffickers' mental tricks may help people avoid being trafficked or aid them to escape.

## **Concurrent Panel V: Health Systems**

**AUTHOR(S):** Ryoto Sakaniwa

**UNIVERSITY:** Osaka University, Department of Social Medicine, Public Health

**TITLE:** The relationship between accessibility to hospitals and communicable diseases increases sub-acute disaster management

**ABSTRACT: Introduction:** It has been controversial issue while the world that structuring effectible strategy for post disaster management. It however is unclear whether factor more contribute to the key issue that communicable diseases (CDs) increasing of sub-acute phase. Therefore, this study aimed to identify main cause of CDs increasing and find point of a critical intervention among the period. **Method:** We performed survey at four different hospitals and seven communities from 30 March to 14 April 2015 at sub-acute phase of disaster in Vanuatu Republic (there had been stricken world greatest hurricane ever, PAM, on 14 March 2015). All diagnostic criteria and its related clinical observation were defined with referring ICD-10 and EWARN. Additionally, the site where were located at under 10 minute from any hospital, and four hospitals were given the observation that good accessibility for hospitals. Logistic regression analysis was used for assessing Odds Ratio (OR) and factors associated with clinical outcomes. **Result:** A total 545 patient were included throughout the period. 279 of overall were good accessibility for hospitals (51%), else poor were 266 (49%). Only the relationship between CDs and poor accessibility for hospitals shown strong relevant (OR=3.41, 95%CI=2.34-4.96). While another measurement, Non-Communicable Diseases (OR=0.62, 95%CI: 0.38-1.10) and Accidents/Wounds (OR=0.91, 95%CI=0.60-1.39), there were no significant difference in Odds Ratio of the relationship between poor accessibility. **Conclusion:** Good or poor accessibility for health service may be a significant key concern of the strategy that addressing communicable diseases increase in sub-acute phase of post disaster management for further the future.

**AUTHOR(S):** Shengnan Wang

**UNIVERSITY:** Fudan University, School of Public Health

**TITLE:** Increasing coverage of Hepatitis B vaccination in China: a review of intervention and implementation experiences

**ABSTRACT: Objectives:** This study used a system evaluation method to summarize China's experience on improving the coverage of hepatitis B vaccine, especially the strategies employed to improve the uptake of timely birth dosage. Identifying successful methods and strategies will provide strong evidence for policy makers and health workers in other countries with high Hepatitis B prevalence. **Methods:** We conducted a literature review included English or Chinese literature carried out in mainland China, using PubMed, the Cochrane databases, Web of Knowledge, National Knowledge Infrastructure (CNKI), Wanfang data and other relevant databases. **Results:** 19 articles about the effectiveness and impact of interventions on improving the coverage of hepatitis B vaccine were included. Strong or moderate evidence showed that reinforcing health education, training and supervision, providing subsidies for hospital delivery, strengthening the coordination among health care providers, using out-of-cold-chain storage for vaccines were all important to improving vaccination coverage. **Discussion:** We found evidence that community education was the most commonly used intervention and out-reach programs such as out-of-cold chain strategy were more effective in increasing the coverage of vaccination in remote areas where the hospital delivery rate was respectively low. The essential impact factors were found to be strong government commitment and the cooperation of the different government departments. **Conclusions:** Public interventions relying on basic health care systems combined with outreach care services were critical elements in improving the Hepatitis B vaccination rate in China. This success could not have occurred without exceptional national commitment.

**AUTHOR(S):** Popy Yuniar

**UNIVERSITY:** Universitas Indonesia, Faculty of Public Health

**TITLE:** Embedding knowledge management for national health information system improvement: Implementation of a data integration process

**ABSTRACT:** Knowledge management reveals growing interest in public health area. The numbers of health programs have brought some consequences to the increase of information volume on which public health agencies have to manage vast quantities of that information, including the information from different resources. Quality, ensuring and understanding data quality are critical requirements for knowledge management but difficult to do. Data collected for one purpose and integrated with other data or used for another purpose may no longer meet data quality parameters. Ability to access and use information, while many agencies collect and compile large volumes of information, few have established the means to access and analyze the data with appropriate tools. This challenge is related to the challenge of maintaining security and the means for users to understand the quality of the data. In particular, this research aims to identify, describe and analyze how in the district level managed the knowledge and the organizational as the environment to improve performance of HIS during the health system integration. This study build upon three stream of research (1) Integration of Information System, (2) Knowledge Management implementation in the context of integration process and (3) Organization Learning (OL). The Contribution of this study is to provide a fit model of integrated health information system. How an organization will be able to manage knowledge and building components of the learning organization to perform a variety of issues related to HIS improvement, especially at the time of system integration phase.

**AUTHOR(S):** Tin Tin Su

**UNIVERSITY:** University of Malaya, Dept. of Social and Preventive Medicine

**TITLE:** Determinants of household catastrophic health expenditure: A global perspective for universal health care

**ABSTRACT: Background:** World Health Organization estimated that 150 million people experienced severe financial difficulties (catastrophe) annually and about 100 million became poor from the consequences of health care payments. For that, we carried out a systematic review to identify the determining factors of household catastrophic health expenditure (CHE) in different income countries around the world. **Method:** Both electronic and manual searches were conducted. Electronic resources included PubMed, Medline, ScienceDirect, Web of Science, CINAHL Complet@EBSCOhost, Scopus, Cochrane library and Embase. The main outcomes of interest were the determinants of CHE due to health care payment and the studies' prevalence of CHE. **Result:** Altogether 30 studies which met the inclusion criteria were included in this review. All studies were survey-based reports on the determinants of CHE. Household economic status, incidence of hospitalization, presence of elderly in the family, and having a family member with chronic disease were the common significant factors associated with household CHE. The mean prevalence of CHE among the studies included in this review was estimated by income (10% threshold) and capacity to pay (40% threshold), and found to be 20.84 (95% CI: 12.89 – 28.79) and 6.55 (95% CI: 4.61 – 8.49), respectively. **Conclusion:** We conclude that many factors were found to be associated with CHE which should be taken into account by policy makers for identifying vulnerable households to ensure financial protection and achieve universal health care. ...

**AUTHOR(S):** Hidayatulfathi Othman<sup>1</sup>, Mohd. Idahan M Anuar<sup>2</sup>, Rozita Hod<sup>3</sup>, Mazrura Sahani<sup>1</sup> & Zainudin Mohd. Ali<sup>4</sup>

**UNIVERSITY:** <sup>1</sup>School of Diagnostic and Applied Health Sciences, Faculty of Health Science, Universiti Kebangsaan Malaysia, <sup>2</sup>Unit Promosi Kesihatan, Bahagian Kesihatan Awam, Jabatan Kesihatan Negeri Sabah, Kota Kinabalu, Sabah, Malaysia <sup>3</sup>Dept. Of Public Health, Faculty of Medicine, Universiti Kebangsaan Malaysia, <sup>4</sup>Jabatan Kesihatan Negeri Sembilan, Negeri Sembilan, Malaysia

**TITLE:** What makes the “communication for behavioral impact” (COMBI) approach effective?: Lessons from community participation and social engagement

**ABSTRACT:** The World Health Organization (WHO) has introduced the Communication for Behavioral Impact (COMBI) in 2000 as an approach of continuous action planning in communication and social mobilization. When COMBI program was promoted in the community and selected target groups, community acceptance is good where all the recommended subjects within the COMBI approach received positive feedback. Later, there's a decreasing in society interest in continuing their participation in COMBI activities. However, this is not the scenario for the Soronsob communities of Sabah state, Malaysia. Before COMBI was introduced in 2007 in the area, there was a huge number of dengue cases and the fact that there is no dengue cases recorded after the year 2013. Through an observation, it appeared that the Soronsob residents are still actively practicing the COMBI. Through the preliminary study, many residents felt COMBI program belongs to them and they are very happy in continuing practicing it. Therefore, there was a need to identify the factor(s) that influenced the success the program. Data collection methods included key informant interviews, focus group discussions, in-depth interviews and ongoing participant observation, as well as structured observations. The study covered 73 respondents, selected using purposive sampling and undergone through three sessions of focus group discussion which are narrowed down based on occupational groups, while the remaining respondents has answered questionnaires provided. Findings show that the influence of leadership and support by local community contributed towards sense of belonging among Soronsob residents. Through descriptive analysis and frequency based on questionnaire indicated the most important factor towards sense of belonging is the support by local community leaders with value of Cronbach-Alpha 0.876. Results through focus group discussions which has been coded and transcript based on themes found support by local communities are influencing towards sense of belonging among Soronsob residents. As the

conclusion, the sense of belonging is the enabling factor and the most influential indicator in order for a community to empower COMBI approach and directly impacted the control of dengue cases in the area.

**AUTHOR(S):** Gaynullina Yulia Igorevna

**UNIVERSITY:** Far Eastern Federal University

**TITLE:** Public Health in Japan and the USA: Relevance for Russia

**ABSTRACT:** Modern health care is characterized by mutual integration of the elements of health systems in different countries. The integration should take place into account the historical, demographic and economic characteristics of a particular state, mentality of the population etc. Health systems of many countries are faced with problems growth of expenses that is associated with development of new technologies and require decision. This country focuses on use of market mechanisms in the social area. The other features are decentralization of social policy, the western style of decision-making. For a long time this system it was effective. However, the constant growth of health care spending combined with the inadequate availability medical services for the part of Americans has forced Obama to initiate reform. These include a tax increases on the rich citizens and rich pharmaceutical companies, providing guaranteed medical care all citizens, the introduction of compulsory health insurance, the development of controlled competition between insurance companies, regulation of health insurance companies and the prices for medical services, increasing financing of for Preventive Medicine. The main provisions of the reform not imply a radical change, but only adapt it to the new requirements of American society. On the formation of high-performance health system in Japan was greatly influenced by mentality the Japanese features (the system of lifetime employment, east style of decision-making, concern for the environment). Basically, the employer is the main payer for medical services. National health system and overall compulsory health insurance are the basis for access to care. The patient pays for treatment of their material possibilities, but the level and volume medical services gets by their needs. This experience in the development of health systems the US and Japan may be useful for Russia.

## **Concurrent Panel VI: Gender and Reproductive Health**

**AUTHOR(S):** Mengqi Chen

**UNIVERSITY:** Fudan University, Department of Maternal and Child Health Care, School of Public Health

**TITLE:** A review of intervention studies on sexual and reproductive health in Chinese adolescents

**ABSTRACT: Objective:** To review the effect of Knowledge-Attitude-Practice (KAP) related interventions on sexual and reproductive health (SRH) for adolescents in China; to compare them with similar international studies, and to inform future studies. **Methods:** Literatures including interventions on sexual and reproductive health for adolescents in China, either written in English or Chinese, published between 2005 and 2014 were searched from different databases. Each study was systematically selected and assessed according to the inclusion criteria and its effects were summarized systematically. **Results:** A total of eight studies showed that comprehensive interventions on sex and reproductive health among Chinese adolescents improved knowledge and attitudes on premarital sex; improved the awareness of safe sexual behavior and the use of condoms for the short-term. There was also the improvement on the

knowledge for the long term. **Conclusions:** The quality of most SRH intervention studies for adolescents in China were not in good quality. It is suggested to carry out more studies with large samples, using experimental designs and set the intervention based on behavior change theoretical models. The future studies should pay attention to different adolescent periods, advocate family education, and evaluate both the short-term and long-term effect of interventions on behavior changes.

**AUTHOR(S):** Wei Yang

**UNIVERSITY:** Fudan University, School of Public Health

**TITLE:** A review of practices and effectiveness of post-abortion care services in China

**ABSTRACT: Background:** Post-abortion care (PAC) service, which has been advocated by international society, aims to improve women's reproductive health and the quality of life. Post abortion care includes five essential elements: community and service provider partnerships, counseling, treatment, family planning and contraceptive services, reproductive and other health services. The objective of this review is to introduce the current practices and effectiveness of PAC in China. **Method:** Databases: China knowledge resource integrated database/Wanfang database. Practice study's inclusion criteria: 2004-2014; related with the topic; not review. Intervention study's inclusion criteria: 2010-2014; related with the topic; sample size more than 150; parallel control. **Results:** Cross-sectional studies show China has not carried out routine and standard PAC mainly performed in hospital. Service providers and users have limited knowledge about PAC. The consciousness of providers to provide the service actively is backward. The most common service for induced abortion women is propaganda and education by face to face after abortion. A few providers supply the free contraceptive materials. Ten intervention studies found show women's contraceptive knowledge and repeated unwanted pregnancies can be improved by education, counseling and family planning. **Conclusions:** If the contraceptive service is not reached, the repeated abortion phenomenon will appear in the country that induced abortion is legal, which influences female's reproductive health. PAC is helpful to improve the reproductive health consciousness of induced abortion female, to adopt contraceptive methods timely and to decrease repeated abortion. It is necessary for China to carry out routine and standard PAC.

**AUTHOR(S):** Sachiko Baba

**UNIVERSITY:** Osaka University, Center for International Relations

**TITLE:** Lost third baby boom in Japan

**ABSTRACT:** Japan experienced the first baby boom in 1947-49 and the second baby boom in 1971-74. However, the third one has not been observed since then. To examine any potential demographic trend which could have led to the third baby boom, we first analyzed time trends of the numbers, rates, and ratios of live birth and abortion using Japanese governmental data. Second, we set the two birth cohorts; the first baby boomers who were 0-4 years old in 1950 and the second baby boomers who were 0-4 years old in 1975, and analyzed their rates and ratios of birth, stillbirth, and abortion by 5-year age group. We found gradual declines in numbers of live birth and abortion following the second baby boom, but no further decline in birth rate after 1990, with a subtle peak in abortion rate. In the first baby boomers' cohort, there was a decline in abortion ratio and a peak in birth rate among 25-29 years old. In the second baby boomers', a decline in abortion ratio has lasted even longer, but the highest birth rate was half of the first baby boomers. In conclusion, the impact of the reproduction by the second baby boomers was less large only because the smaller population of the second boomer itself and by the smaller peak in birth rate

compared with the first baby boomers, which made no decline in birth rate but the no observable increase in number of birth.

**AUTHOR(S):** Paolo Miguel M. Vicerra

**UNIVERSITY:** University of Marikina

**TITLE:** Correlates of teenage pregnancy and risk of pregnancy in the Philippines

**ABSTRACT:** Recent reports show that from 1999 to 2009, there is a dramatic increase in teenage pregnancy in the country making it the highest among ASEAN countries. The issue of teenage pregnancy may be viewed not solely on health outcomes but on the overarching issue of positive maternal and child well-being from a population and development perspective. Lacking in the literature is an analysis of female youth who had ever been pregnant decoupled from the concept of it being unintended. Also lacking especially in the Philippines context is focusing on the women who are at risk of this event. Determining associated characteristics for this event is an apt pre-emptive profile that may help policies. For this study, the 2008 and 2013 National Demographic and Health Survey is utilised. Results show that being in a union, low education and socioeconomic status; living with parents, access to tri-media, and contraceptive practice are correlated with the outcomes of having been pregnant and the risk of being pregnant. Age at first sexual engagement and residing in the rural area are correlated only to having been pregnant. This paper offers an initial view on female youth and their risk to reproductive health outcomes. This may help toward creating programmes that can target particular comportment that will abate the prevalence of such event and subsequently improve maternal and child health.

**AUTHOR(S):** Erlinda Castro-Palaganas

**UNIVERSITY:** University of the Philippines Baguio, College of Social Sciences

**TITLE:** The Individual Deprivation Measurement: evidence of a gender-sensitive approach to poverty measurement

**ABSTRACT:** This presentation highlights the Individual Deprivation Measurement (IDM) as an evidence of a gender-sensitive measure of multidimensional poverty vis-à-vis the role of health professionals within a UHC framework. I was part of a 6-country multi-disciplinary team who undertook participatory research across Asia, Africa and the Pacific to learn how they would define and measure poverty. Researchers from the Centre for Applied Philosophy and Public Ethics at the Australian National University, led the team who designed a metric that would be as inclusive as possible of values held by many poor people, women and men. The overall research question “What is a just and justifiable measure of poverty that is genuinely gender sensitive and capable of revealing gender disparities?” was explored using a feminist methodology and research methods.” This was conducted over four years in two phases. Both phases used focused group interviews, key informant interviews, observations and record reviews and underwent Ethics Review Boards approvals. The IDM measures the poverty of individuals, not just households and the differences in how women and men experience poverty – including within the household. The IDM recognizes that escaping poverty requires more than just money. Thus, the IDM measures deprivation in 15 dimensions of human life: food, water, shelter, sanitation, health care, education, energy/cooking fuel, sanitation, family relationships, clothing/personal care, violence, family planning, the environment, voice in the community, time-use, and respect and freedom from risk at work. The paper shall discuss its improvements upon existing measures of poverty and gender equity.

## **Concurrent Panel VII: Environmental Health**

**AUTHOR(S):** Mazrura Sahani<sup>1</sup>, Ng Chris Fook Sheng<sup>2</sup>, Wan Mahiyuddin Wan Rozita<sup>3</sup>, Ueda Kayo<sup>4</sup>, Kurata Gakuji<sup>5</sup>, Watanabe Chiho<sup>2</sup>, Abd Samad Badrul Hisham<sup>6</sup>, Latif Mohd Talib<sup>7</sup>, Md.Khadzir Sheikh Ahmad<sup>8</sup>, Toha Haidar Rizal<sup>6</sup>, Maali Shamsul<sup>6</sup>, Mustafa Amal Nasir<sup>3</sup>, Abdullah Nor Aini<sup>3</sup>

**UNIVERSITY:** <sup>1</sup>School of Diagnostic and Applied Health Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia; <sup>2</sup>Department of Human Ecology, School of International Health, Graduate School of Medicine, University of Tokyo, Tokyo, Japan; <sup>3</sup>Epidemiology and Biostatistics Unit, Medical Research Resource Centre, Institute for Medical Research, Kuala Lumpur, Malaysia; <sup>4</sup>Environmental Health Division, Department of Environmental Engineering, Graduate School of Engineering, Kyoto University, Japan; <sup>5</sup>Atmospheric and Thermal Environmental Engineering Laboratory, Department of Environmental Engineering, Graduate School of Engineering, Kyoto University, Japan; <sup>6</sup>Johor State Health Department, Johor Bahru, Johor, Malaysia; <sup>7</sup>School of Environmental and Natural Resource Sciences, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia; <sup>8</sup>Health Informatics Centre, Planning Division, Ministry of Health, Malaysia

**TITLE:** Assessing the health effects of particulate air pollution in a low carbon development region in Malaysia

**ABSTRACT:** Actions that lower carbon emissions to mitigate climate change have also been suggested to alleviate health impacts of air pollution. However, current understanding of this association is limited. We conducted a study to quantify the potential health gains associated with a reduction of air particulate matter as a result of low carbon development strategy in the southern region of Peninsular Malaysia. First, we performed epidemiological studies using retrospective population-based data to estimate the effects of daily exposure to particulate matter with aerodynamic diameter of 10µm or less (PM10) on daily cause-specific hospital admissions. Next, using chemical transport models, we predicted the levels of PM10 in year 2025 under two scenarios – business-as-usual or low-carbon countermeasures in line with the policy to reduce emission by 40%. We then computed the additional hospital admissions attributable to PM10 exposure by scenario, with consideration to population changes. Findings suggest low carbon development strategies bring important public health benefits due to improved air particulate level; this can be an important motivator for controlling emission across the nation.

**AUTHOR(S):** Szu-Ying Chen<sup>1,2</sup>

**UNIVERSITY:** <sup>1</sup>Emergency and Critical Care Center, E-Da Hospital, Kaohsiung, Taiwan; <sup>2</sup>Department of Leisure and Recreation Industry Management, College of Humanities and Management, Fooyin University, Kaohsiung, Taiwan

**TITLE:** Blood Pressure and Associated Cardiovascular Parameters in Responses to Particulate Matter: Evidence from Taiwan

**ABSTRACT:** Ambient air pollution (AAP) has become an important public health issue in Taiwan following the rapid industrialization, motorization, and urbanization in the past decades. An increasing body of evidence suggests the harmful effects of AAP, especially particulate matter (PM) on human health, among which the impacts of AAP on cardiovascular health were most documented. In 2010, The

American Heart Association described the potential biological pathways linking PM and cardiovascular disease, and changes in blood pressure (BP) have been proposed as one of important biomechanisms. In Taiwan, several experimental and epidemiological studies evaluated the association between short-term exposures to PM and BP, but the results were inconsistent. Short-term exposures to PM were observed to associate with pulse pressure narrowing, decreases in cardiac contractility, and increase in vascular resistance both in panel and experimental studies. Using land use regression model, a new-developed technique to estimate individual's long-term PM exposures, two studies further demonstrated that long-term exposures to PM are associated with increases in diastolic BP and carotid intima media thickness. Also, the cardiovascular metrics in response to short- and long-term exposures to PM may differ by individual and geographical variation. The study results from Taiwan suggest that the impact of short-term exposures to PM on cardiovascular system may be primarily through cardiac and vasomotor dysfunction on vulnerable population; while long-term exposures to PM involve elevated BP and atherosclerosis.

**AUTHOR(S):** Budi Haryanto

**UNIVERSITY:** University of Indonesia, Department of Environmental Health

**TITLE:** The emerging risk of used lead acid battery to human health in Indonesia

**ABSTRACT:** In Indonesia, more than 200 illegal used lead acid battery (ULAB) smelters currently found. Only a few of health study supported the finding of its lead-related symptoms and diseases among population living at surrounding the smelters. To assess the blood lead levels (BLLs) and potential health impacts among population at surrounding ULAB's recycling smelters, we evaluated health effects reported from year 2003 to 2013, conducted focus group discussion to metals' smelter owner/workers and a group of 35 housewives, and retook and measured BLLs. It was found that many of children are having difficulty to get high score in their schools and having stunting or problem in physical development. The average mean of BLLs increased almost double in 2015 compared with in 2011. The risk of having hypertension, interference in ability to make red blood cell in female occurred among 24% respondents; Elevated blood pressure, hearing loss, interference in ability to make red blood cell in male (20%); Kidney damage, infertility in male, Nerve problems-decreased sensation and ability to move quickly (13%); Decreased ability to make red blood cell (20%), and; Frank anemia, decreased life-span, coma/seizures (22%). The population living surrounding area of ULAB's smelters is seriously severe of having chronic health problems. It is recommended that the smelters must be closed or placed far away from the municipality.

**AUTHOR(S):** Nurhayati Prihartono

**UNIVERSITY:** University of Indonesia, School of Public Health

**TITLE:** Thinner exposure, work practices and risk of abnormal lung function among painting workers in the automotive industry

**ABSTRACT: Background:** Automotive industry has grown fast in Indonesia. The majority of the manufacturing industry still uses paint containing VOC. Continuous exposure to VOC may have an adverse effect on health. The study aimed at assessing risk of abnormal lung function associated with thinner, other chemical exposure, and the role of preventive measure. **Methods:** A cross-sectional study was conducted among paint workers. Worker's medical check-up was used to obtain abnormal lung function that included broncho restriction and obstruction. We assessed the intensity of thinner and other chemical exposures semi-quantitatively based on job task. Information on duration of work, use of PPE,

smoking, age, and BMI were collected. Adjusted prevalence ratio (PR) of abnormal lung function associated with work environmental factors was calculated using a modified Cox proportional hazard model. **Results:** Prevalence of abnormal lung function was higher among workers who lack usage of PPE, work longer duration, or past-smokers. Exposed to thinner was associated with an increased prevalence of abnormal lung function (PR 2.73, 95% CI 2.73 - 6.16). Although the use of PPE appeared to modify the prevalence of abnormal lung function associated with thinner exposures, it did not prevent the risk: PR (and 95% CI) in lack of use and use of PPE were 3.11 (0.74 – 13.05) and 2.20 (0.83 – 5.79), respectively. **Conclusion:** This study showed a health hazard due to thinner exposure in an automotive industry. Improvement of preventive measures should be taken into account to get a healthy working environment

**November 1, 2015**

## **ABSTRACTS FOR SPECIAL PRESENTATIONS**

**AUTHOR(S):** Khampasong Thappanya,<sup>1</sup> Outavong Phathamavong,<sup>2</sup> Frank Haegeman,<sup>2</sup> Peter Haemann,<sup>2</sup> Arie Rotem<sup>2</sup>

**UNIVERSITY:** <sup>1</sup> Department of Health Personnel, Ministry of Health, Vientiane, Lao PDR;

<sup>2</sup> Health Sector Support Program Phase 2 (LAO/027 Project), Lux-Dev, Vientiane, Lao PDR

**TITLE:** Strengthening the engagement of provinces in health workforce planning and management: a case study from Lao PDR

**ABSTRACT:** Shortage and uneven distribution of qualified health personnel, especially in rural and remote areas impede progress towards attainment of health improvement targets. The Health Reform Framework adopted by the Lao PDR government put emphasis on development and deployment of qualified health personnel to rural and remote areas in order to improve availability and access to quality health services, and address urgent health issues with particular attention to maternal and child health. The Health Personnel Development Strategy developed as part of the Ministry of Health response, provides targets for production, recruitment and retention of HW based on estimates of the staffing levels required to perform essential health services at the respective levels of the health system. With clearer strategic directions and detailed estimates of the staffing requirements, the MOH has been successful in its bid for a major increase in the recruitment quota. With significant increase in the quantity of health personnel, great challenges remain with regard to the distribution, deployment and retention of staff and ensuring the quality of their performance. Recent analysis shows increase in the number of health centers that can meet the minimum staffing levels including a midwife as well as improvement in the allocations of doctors and nurses to district hospitals. It is noted, however, that often the allocation of staff does not reflect the local needs due to inadequate skill mix and limited capacity of the Provincial Health Departments to identify and address the specific health workforce requirements of the health facilities in their jurisdiction. It is also evident that the data available to the Ministry of health concerning the deployment of staff at the local level are often not accurate, leading to less than optimal allocation of scarce human resources. To address these issues the Ministry of Health has recognized the need for intensive efforts to increase the engagement of the Provincial Health Departments in health workforce

planning and management, and improvement of their capacity to identify and resolve human resource issues, including; bridging major staffing gaps, improving utilization and productivity of staff and improving the competence and commitment of their health personnel. To achieve these aims the MOH in collaboration with the Luxembourg supported project on health has commenced a program of support to three provinces focusing on; preparation of Provincial Health Workforce plans, strengthening the management of human resources including the cooperation between the central and provincial levels and investment in the human capital available to the provinces in order to improve their health personnel competence and commitment. This presentation aims to describe the process undertaken, the investments made and the outcomes achieved to date under this project. Lessons derived from this initial intervention will enable the MOH to extend and upscale the effort to include all the 18 provinces in Lao PDR and to attain significant improvement in the utilization, productivity and performance of the health workforce.

**AUTHOR(S):** Liang Ji

**UNIVERSITY:** Fudan University

**TITLE:** Improving maternal health in China: a review of intervention projects at national and provincial level

**ABSTRACT:** Shortage and uneven distribution of qualified health personnel, especially in rural and remote areas impede progress towards attainment of health improvement targets. The Health Reform Framework adopted by the Lao PDR government put emphasis on development and deployment of qualified health personnel to rural and remote areas in order to improve availability and access to quality health services, and address urgent health issues with particular attention to maternal and child health. The Health Personnel Development Strategy developed as part of the Ministry of Health response, provides targets for production, recruitment and retention of HW based on estimates of the staffing levels required to perform essential health services at the respective levels of the health system. With clearer strategic directions and detailed estimates of the staffing requirements, the MOH has been successful in its bid for a major increase in the recruitment quota. With significant increase in the quantity of health personnel, great challenges remain with regard to the distribution, deployment and retention of staff and ensuring the quality of their performance. Recent analysis shows increase in the number of health centers that can meet the minimum staffing levels including a midwife as well as improvement in the allocations of doctors and nurses to district hospitals. It is noted, however, that often the allocation of staff does not reflect the local needs due to inadequate skill mix and limited capacity of the Provincial Health Departments to identify and address the specific health workforce requirements of the health facilities in their jurisdiction. It is also evident that the data available to the Ministry of health concerning the deployment of staff at the local level are often not accurate, leading to less than optimal allocation of scarce human resources. To address these issues the Ministry of Health has recognized the need for intensive efforts to increase the engagement of the Provincial Health Departments in health workforce planning and management, and improvement of their capacity to identify and resolve human resource issues, including; bridging major staffing gaps, improving utilization and productivity of staff and improving the competence and commitment of their health personnel. To achieve these aims the MOH in collaboration with the Luxembourg supported project on health has commenced a program of support to three provinces focusing on; preparation of Provincial Health Workforce plans, strengthening the management of human resources including the cooperation between the central and provincial levels and investment in the human capital available to the provinces in order to improve their health personnel competence and commitment. This presentation aims to describe the process undertaken, the investments made and the outcomes achieved to date under this project. Lessons derived from this initial intervention will enable the MOH to extend and upscale the effort to include all the 18 provinces in Lao PDR and to attain significant improvement in the utilization, productivity and performance of the health workforce.

## ABSTRACTS FOR SPECIAL WORKSHOP ON MATERNAL AND CHILD HEALTH

**AUTHOR(S):** Zhuo-xin Peng

**UNIVERSITY:** Fudan University, Department of Public Health

**TITLE:** Effectiveness and experience of the programs of mother-to-child transmission to prevent HIV/AIDS in China

**ABSTRACT:** Mother-to-child transmission of HIV is a serious threat to maternal and child health. In response to this public health problem, China has launched Prevention of Mother-Child Transmission of HIV (PMTCT) programs and achieved great success in the reduction of HIV via mother to child transmission. The PMTCT programs consist of a range of interventions, including improved antenatal services, HIV counseling and testing for pregnant women, antiretroviral drug prophylaxis for HIV positive pregnant women and newborns, referral to support groups, counseling on options for safer infant feeding practices, and continued follow-up service for HIV positive mothers and their children. The topic of the presentation is to report the effectiveness of the programs and to share the implementation experience and enablers originating in practice with international health policy makers and researchers. The PMTCT programs helped reduce the HIV MTCT rate from 33.3% in 2003 to 7.1% in 2013, while more than 8.7 million pregnant women received HIV antibody testing services, and HIV testing rate raised to 92.9%. National government supportive policies environment and international fund support; Multi-sector cooperation; regular visiting counsel and testing service in poor, remote mountainous and ethnic areas; Adequate information systems for assessment and monitor; and Opt-Out and Real-Name Registration Mode are regarded as the key points in implementation.

**AUTHOR(S):** Hien Thi Ho

**UNIVERSITY:** Hanoi School of Public Health

**TITLE:** Toward an appropriate model of HIV prevention from mother to child in Vietnam: Barriers to access and utilization of services

**ABSTRACT: Background:** Currently, most HIV positive children are infected through mother-to-child transmission. In Vietnam, the rate of HIV among pregnant women is approximately 0.19%. HIV prevention from mother to child transmission (PMTCT) is the most important measure to reduce the transmission rate of 25-30% (without interventions) to 2-5% (with proper and prompt interventions). In Vietnam the rate of HIV testing among pregnant women is low (about 57.3% in 2012); about 40% of mothers were diagnosed with HIV during labour; and PMTCT services have not been provided routinely in reproductive health care facilities. Understanding barriers to PMTCT is essential to develop effective interventions in Vietnam. The study aims to 1) identify the barriers to PMTCT related services in Vietnam and 2) identify and pilot effective measures to increase access to early PMTCT services among pregnant women. Methods: Qualitative research design, in-depth interviews with patients and staff, using semi structured interview guides, will be conducted. The study aims to explore and identify: barriers from the individuals, families, and health care staff and services to the access and utilization of available PMTCT services, the needs of PMTCT services among pregnant women especially in mountainous areas, the feasibility of integrated services between HIV and reproductive health care systems, and model

services needed. **Results and Discussion:** The study findings will identify barriers and disadvantages of the existing PMTCT services and propose an effective model for PMTCT services for mothers and children in a mountainous province in Vietnam. Lessons learned from the Chinese experience will be applied in developing an appropriate PMTCT service model for mothers in remote areas of Vietnam.

**AUTHOR(S):** Dong Lijia

**UNIVERSITY:** Fudan University, School of Public Health

**TITLE:** Maternal and child health development in China: a policy analysis of the National Plan of Action for Children from 2001 to 2010

**ABSTRACT: Background:** The National Plan of Action for Children (NPAC) which began in 1992 contributed a lot to China's great progress in maternal and child health (MCH). This research aims to summarize China's experience of scaling up MCH interventions through NPAC's implementation from 2001 - 2010, and provides lessons to low and middle income countries (LMIC). **Methods:** A review of relevant policy documents and reports was conducted. A policy analysis framework was used to analyze the context, content, actors and process of implementing the program. Key informant interviews were conducted with government authorities, MCH experts, and international development partners to validate the findings. **Results:** NPAC pushed the MCH goals to be included in the national and provincial plans for social and economic developments. A strong coordination mechanism was formed through a horizontal system of the work committee for women and children, which ensured the NPAC's implementation. Effective monitoring and evaluation processes and an accountability system was established to keep implementation on track. Specific projects were carried out to address key MCH issues. These factors collectively contributed to the plan's success and effectiveness. **Conclusion:** Government's commitment in developing and implementing a measurable action plan, consensus among actors, and effective governing system with a powerful coordination body can improve health status in LMICs. Focusing on the prioritized MCH issues and seeking support from international donors are important in developing national projects. Establishing rigorous monitoring and evaluation systems with an accountability system is also key to reaching specific goals.

**AUTHOR(S):** Yi Qian

**UNIVERSITY:** Fudan University, School of Public Health

**TITLE:** Comparative study on health workforce among China, Vietnam, and Laos

**ABSTRACT: Background:** China has achieved remarkable progress in MCH, which could be borrowed by other developing countries. Health workforce, as the key role in achieving health goals, is the prerequisite for transferring China's experiences to other countries. **Objectives:** To comparatively analyze the health workforce situation in China, Vietnam, and Laos, to identify the gaps of health workforce, and to provide practical recommendations on implementation plan in Vietnam and Laos. **Methods:** Secondary data (both quantitative and qualitative data) on health workforce were collected from multiple international and domestic sources. Four dimensions of health workforce including classification system, quantity, quality, and distribution in three countries were systematically analyzed and compared. **Results:** The density of nurses and midwives per 1000 population in China and Vietnam showed steady rises from 2000 to 2012 (1.9 in China and 1.3 in Vietnam respectively in 2012), which remained below 1.0 in Laos between 2005 and 2012 (the data was missing before 2005). In terms of distribution, the majority of highly skilled health workers in three countries are centralized in urban regions and hospitals rather than community health centers. **Conclusion:** There exists large gaps of health workforce among three

countries, which should be taken into consideration during implementation of Chinese experiences of MCH in Vietnam and Laos. Some short-term and practical capacity building programs are highly recommended to carry out before the implementation. Meanwhile, long-term actions for strengthening health workforce backing up by political commitment and sufficient investments are utmost needed.

## **CONCURRENT PANELS**

### **Concurrent Panel I: Maternal Health**

**AUTHOR(S):** Le Minh Thi, Luu Thi Hong, Doan Thi Thuy Duong, Bui Thi Thu Ha

**UNIVERSITY:** Hanoi School of Public Health

**TITLE:** The role of village health workers to promote institutional childbirth in rural, mountainous areas in Vietnam

**ABSTRACT: Background:** In 2013, nearly 285,000 women died world-wide due to mostly preventable pregnancy or childbirth complications. Maternal mortality ratio (MMR) in Vietnam in 2009 is 69/100,000, however, there are large MMR disparities between the urban and rural/mountainous area. The rate of home delivery in the rural remote area in Vietnam is 44% while in the urban area the rate is less than 1%. Similarly, the MMR in the mountainous region is 4-5 times higher than one in the lowland area. Lesson learned from China shows the successful result of reducing MMR by shifting the role of village health workers/village midwives to become the community-hospital linker. This protocol paper is developed to apply this lesson into Vietnam context. **Objectives:** 1. to identify the gaps between health service supply and demand sides in the remote mountainous area; 2. to assess the Knowledge-attitude-practice of village health workers on mobilizing women to institutional childbirth in remote area. 3. To pilot the lesson learned from China into the context of Vietnam in order to improve the women's awareness of and accessibility to the institution-based childbirth. **Methods:** Cross sectional study is designed with qualitative and quantitative approach. 2 mountainous provinces in the Northern and in the Central highland of Vietnam will be selected. The pilot study will be tested in one of the two provinces. **Results and Discussion:** The study findings will identify the gaps between health service supply and demand sides in the remote mountainous area. The study also shows how lessons learned from the Chinese experience will be applied in Vietnam.

**AUTHOR(S):** Xu Qian

**UNIVERSITY:** Fudan University, Department of Maternal and Child Health

**TITLE:** Towards universal access to skilled birth attendance: The process of transforming the role of TBAs in rural China

**ABSTRACT: Background:** Traditional birth attendants (TBA) are the primary source of maternity care in many developing countries, especially in rural areas and play an essential role in the health of the communities. Objective: To demonstrate how traditional birth attendants in rural regions of China have been integrated into the health system under a policy of institution-based childbirth. **Methods:** Qualitative research was conducted through document reviews and individual in-depth interviews with stakeholders of the safe motherhood program in rural Guangxi Zhuang Autonomous Region, China. A

total of 33 individual interviews were conducted with regional and local politicians, policy makers, health managers, health providers, civil society members, village women cadres, TBAs, village maternal health workers, mothers and their mother-in-laws. **Results:** Since 1998, TBA's traditional role of providing in-home care during childbirth was restructured and their social role was strengthened in rural Guangxi. TBAs' roles and responsibilities were restructured to village maternal health workers in order to promote prenatal care and institutional-based delivery of pregnant women. TBAs' role was redesigned to function as the linkage between women and the health system. A new policy formalized the role of village maternal health workers and facilitated the transformation through training TBAs for their new role, and providing incentives and sanctions for human resources management. **Discussion:** The China experience of transforming the role of TBAs in Guangxi rural area is an example of successfully engaging TBAs to promote institutional-based childbirth which could be transferred to similar low and middle income countries.

**AUTHOR(S):** Richard Adanu and Augustine Ankomah

**UNIVERSITY:** University of Ghana, School of Public Health

**TITLE:** Strengthening Maternal and Child Health at the Grassroots level in Ghana using the China Model

**ABSTRACT: Rationale:** Ghana experiences significant disparities in maternal health between the urban and rural areas. Skilled birth attendant coverage is estimated to be 91% in urban areas and 59% in rural areas. Rural areas have higher rates of obstetric complications compared to urban areas. Most of the skilled obstetric health care providers are found in the tertiary hospitals in urban areas while health care providers in the rural parts of the country are usually non-specialists who practice with very minimal support. **Objective:** Using China's model for strengthening maternal and child health at the grassroots, we propose to run a pilot programme in rural Ghana to strengthen the skills of rural health care providers and improve maternal and neonatal health. **Methods:** We propose a pilot programme with two rural districts as intervention sites and two control districts. A team of urban maternal and child health specialists will train staff in the rural districts on how to manage common maternal and newborn complications. The specialist team will continue to support the rural team through consultation phone calls and regular return visits to the rural areas. Baseline and post-intervention maternal and newborn health indicators will be compared between the intervention and control districts. **Expected Results:** We expect improved maternal and neonatal health, health-seeking behaviour and health service utilization. **Discussion:** If successful, this programme will serve as evidence to support the justification of changes within the Ghanaian health system set-up to improve linkages between specialists in urban centres and practitioners in rural areas.

**AUTHOR(S):** Besral

**UNIVERSITY:** University of Indonesia, Department of Biostatistics and Population Studies

**TITLE:** Severe preeclampsia and maternal mortality: A case-control study in the hospital Dr. Abdul Moeloek Lampung, Indonesia

**ABSTRACT:** Severe preeclampsia is one of the main causes of maternal mortality in Indonesia. At Province public hospital Dr. H. Abdul Moeloek Lampung, severe preeclampsia is the leading cause of maternal mortality (47,25%). This study aims to determine the predictor severe preeclampsia (assessed by systolic blood pressure, diastolic blood pressure, proteiunuria, eclampsia and HELLP syndrome) with maternal deaths in public hospital Dr. H. Abdul Moeloek. The design of this study was used case control

by using 60 cases maternal deaths and 120 control. The multivariate logistic regression model confirmed that HELLP syndrome increase risk of maternal mortality (adjusted Odds Ratio is 12.5 (95% CI= 2.90 to 53.72), eclampsia have risk 12.1 time higher to maternal deaths (95% CI = 3.80 to 38.65), diastolic blood pressure 110-119 mmHg have risk 7.4 time higher (95% CI=1.8-29.2), diastolic blood pressure  $\geq$ 120 mmHg have risk 5.5 (95% CI 1.1-23.1), systolic blood pressure  $>$ 190 mmHg have risk 2.1 time higher (95% CI=0.5-7.4), systolic blood pressure 170-190 mmHg have risk 1.6 (95% CI 0.5-4.5), proteinuria +3 have risk 4.2 time higher (95% CI=0.3-27.4), proteinuria +4 have risk 3.2 (95% CI 0.5-31.7), after controlled by maternal age, gravida, gestational age, type of delivery, diazepam consumption, type of residence, employment, and educational level. Need to improve maternal audit to prevent maternal deaths due to severe preeclampsia.

**AUTHOR(S):** Ella Nurlaela Hadi

**UNIVERSITY:** University of Indonesia, School of Public Health

**TITLE:** Analysis of the use of insecticide-treated nets among pregnant women in South Bangka, Indonesia, 2014

**ABSTRACT:** Using the insecticide treated nets (ITNs) is the most effective method to prevent malaria among pregnant women. In order to analyze pregnant women's behavior in using the ITNs and its determinants, a survey was conducted in South Bangka district, Indonesia. A cross sectional design was used towards 256 pregnant women selected by 2 stages cluster and probability proportionate to size. Data were collected through interview using pretested questionnaire for its validity and reliability and analyzed using multiple logistic regressions technique. This study found that, 79.3% pregnant women used ITNs and husband support was the most dominant variables that influence pregnant women behavior. The pregnant women who had enough husband's support had a chance to use the ITNs 8 times than pregnant women who had less after adjusted by knowledge & attitude toward malaria and its prevention and counseling with midwives.

## **Concurrent Panel II: Environmental Health**

**AUTHOR(S):** R Sutiawan

**UNIVERSITY:** University of Indonesia, Faculty of Public Health

**TITLE:** Hygiene and sanitation improvement through water management: a case study from Wanasaba, Lombok Timur district

**ABSTRACT:** National data showed that only 60% of people have access to clean water. It has adverse impacts on people's health. The prevalence of diarrhea in NTB is the third highest among all provinces in Indonesia (13.2%). Therefore, improvement of hygiene and sanitation conditions in rural area is required urgently. Lombok Timur is one of district in NTB which is highest diarrhea cases from other 9 districts with more than 1400 cases in year 2010. There are only 55% household with the healthy category and 58% using latrine. Since in last 3 years there are facilitated community development activities to support hygiene and sanitation improvement program. This paper describes the lesson learned of community-based empowerment program to enhance their awareness and improving hygiene and healthy sanitation using water management strategy. This is a case study in Wanasaba Village, which has applied

integrative participatory methods to determine the best approach. Through the community development program in one year, there have a rural water management association “PamDes” that covers 8503 populations from 2881 households. Before implementation there are only less than 50% of people have access to clean water and using latrine, become 71% currently. Improvement program classified by physical activities such as building public water supply and latrine facilities for each household gradually, and non physical like IEC program. Using community based water management by “Pamdes”, they have income to cover their program budgeting to improve rural hygiene and healthy sanitation.

**AUTHOR(S):** Alistair Woodward

**UNIVERSITY:** University of Auckland, Department of Epidemiology and Biostatistics

**TITLE:** Risk assessment, epidemiology and climate change

**ABSTRACT:** The latest IPCC assessment AR5 concluded that climate change should be framed primarily as a risk management issue. There are important differences between this and the usual emphasis in science on error-free prediction. Questions to be faced include: What are the risks to human health that matter most? How should these be defined? What is the probability of exceeding critical thresholds? Critical temperature thresholds for human health are drawn from international exposure standards and expert consultations. Climate projections are provided by the UK Hadley Centre based on plausible high-end emissions scenarios and a range of assumptions about climate sensitivity, running from the present to 2200. Study areas include northern India, southern China and south-east United States. Risk versus time projections will be presented for three endpoints: heat that prevents outdoor competitive sport; conditions unsuitable for moderate to heavy labour; and, extreme heat that is not survivable. Epidemiologists must explore new ways of characterizing the effects of large-scale environmental problems when the impacts are potentially severe but uncertainty is high.

**AUTHOR(S):** Anthony Abustan

**UNIVERSITY:** Graduate School, University of the East - Ramon Magsaysay Memorial Medical Center, Quezon City; Research & Planning Division, Marikina City Disaster Risk Reduction & Management Office, Marikina City, Philippines,

**TITLE:** Marikina city’s resiliency after Typhoon Rammasun: proposition for local government unit climate change adaptation framework

**ABSTRACT: Background:** Marikina City was pummeled by Typhoon Rammasun last July 16,2014. The calamity was caused by natural means, with addition of climate change as its catalyzing agent. This category 4 storm caused catastrophic damages to people and structures, leaving the city with millions of Philippine Pesos in loss. Objectives: Given these facts, the researchers aimed to assess their insights towards resilience after Typhoon Rammasun’s wrath in the city. The assessment will be used by the local government in crafting the Local Government Unit (LGU) Climate Change Adaptation Framework. **Methods:** Using qualitative data inquiry, the study provided valuable perceptions in a multifaceted paradigm involving resiliency of the Marikina City community during Typhoon Rammasun. These perceptions were based from their in depth interviews, selected from 16 barangays of the local government unit using purposive sampling. **Result:** The result of the study showed synergism of different barangays and local government agencies in Marikina City in uplifting the resiliency as the focal theme. The focal theme was reinforced by subthemes specifically: organized protocol of communications during disasters, cascading risk assessment information to the barangays, in depth discussion with the

community's grassroots regarding the impacts of climate change drivers (rainy season, increase in average temperatures, etc.), and empowerment of local officials towards climate change adaptation policies & programs. **Conclusion:** The study contributed a judicious depiction on the resilience of Marikina City in times of disaster. Moreover, it is recommended to have a proposition in the creation of a Climate Change Adaptation Framework that makes disaster risk reduction a local priority with a persuasive basis for policy and implementation. Furthermore, imbibing a philosophy of safety and resilience using awareness and education to all sectors of Marikina City will be of great help. Finally, reinforcing disaster preparedness with effective response will boost resiliency among Marikina City's constituents.

**AUTHOR(S):** Aan Aryanti and Ririn A Wulandari

**UNIVERSITY:** University of Indonesia, Department of Environmental Health

**TITLE:** The Impact of the Concentration of PM10 in Homes with Acute Respiratory Infections (ARI) in Toddlers in the sub district Kamal, West Jakarta 2015

**ABSTRACT:** Particulate Matter (PM10) is one of air pollution to associated with Acute Respiratory Infections (ARI). Patients visit to The Health Service with diagnosis ARI always high and toddlers are vulnerable age group of ARI. The research aims to determine the effect of PM10 in the air house with incidence of ARI in toddlers. Design studies that used is cross sectional with population children under five in sub district Kamal and the sample are 130 toddlers. Measurement results obtained average PM10 levels air in house of toddlers is 76,26 ug/m<sup>3</sup> and 60,8% of the house is not eligible. In conclusion toddlers who lived in the house with the levels of PM10 are not eligible 6.22 time risk of ARI compared with toddlers who live in house with high levels of PM10 qualify.

### **Concurrent Panel III: Aging**

**AUTHOR(S):** Choo Wan Yuen<sup>1</sup>, Debbie Ann Loh<sup>1</sup>, Noran Naqiah Hairi<sup>1</sup>, Farizah Mohd Hairi<sup>1</sup>, Norliana Ismail<sup>1</sup>, Zainudin Mohd Ali<sup>2</sup>, Sharifah Nor Ahmad<sup>2</sup>, Inayah Abdul Razak<sup>2</sup>, Devi Peramalah<sup>1</sup>, Robert G Cumming<sup>3</sup>, Awang Bulgiba<sup>1</sup>

**UNIVERSITY:** <sup>1</sup> Julius Centre University of Malaya, Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Malaysia; <sup>2</sup> Negeri Sembilan State Health Department (JKNNS), Negeri Sembilan, Malaysia; <sup>3</sup> Sydney School of Public Health, University of Sydney, Sydney, NSW, Australia.

**TITLE:** Cognitive function and gait speed among older adults residing in rural Malaysia

**ABSTRACT: Introduction:** Gait speed was reported to predict adverse health outcomes, functional status, survival and cognitive impairment among older adults. The objective of the study was to assess the gait speed and cognitive function of older adults resides in an rural area of Malaysia. **Methods:** Older adults aged 60 years and above living in the district of Kuala Pilah were randomly selected. Anthropometry, 4-meter walk test and interviewer-administered questionnaires were conducted. **Results:** 2,185 respondents (mean age: 70.01 ± 0.27 years, 60% females) were participated in this study. Average gait speed was 0.69 ± 0.01 m/s. Slow gait was prevalent, reported by 70% of the respondents. About one-third of the older adults found to be cognitively deficit. Advanced age, female, lower education level,

being widowed, living with others, presence of co-morbidities, impaired cognitive function and lower physical activity level were significantly associated with slow gait ( $p < 0.001$ ). Slow gait was also associated with poorer executive, memory, language and visuospatial functioning ( $p < 0.001$ ). Cognitively impaired individuals has almost three times the odds of having slower gait (aOR: 2.60, 95% CI: 1.29-5.24) compared with individuals of normal cognitive function. **Conclusion:** Early diagnosis of slow gait and cognitive decline calls for interdisciplinary intervention strategies to improve physical performance and cognitive function among older adults.

**AUTHOR(S):** Martin Lara-Esqueda, Alejandra Salcedo-González (Jaime Javier Cantu Pompa presenting)

**UNIVERSITY:** Tecnológico de Monterrey, School of Medicine and Health Sciences

**TITLE:** Interdisciplinary assessment and interventions in elderly patients in a low-budget setting

**ABSTRACT: Background:** Organized efforts among multidisciplinary healthcare teams are required to assist vulnerable groups. Understanding the different health care systems structures, and their quality standards allow healthcare teams to identify opportunities in patient care and service quality in a limited resource setting. The 2nd U21 Health Sciences Group Summer School “Vulnerability, Low Budget Healthcare” held in July, 2015 by the Tecnológico de Monterrey's School of Medicine and Health Sciences, consisted in a 2-week program involving 20 students from around the world. **Aim:** Create an interdisciplinary clinical-based experience to apply concepts of vulnerability, health systems analysis and global health. **Methods:** Students attended 10 academic sessions and 4 clinical workshops. A problem-based model and collaborative activities were implemented to create a plan for interventions in elderly patients concerning medical, nutritional, dental and psychological evaluation. The clinical field activities took place during the second week at the National Institute for the Elderly (INAPAM). Five physiological screening tools such as the Mini-Mental State Examination and the Geriatric Depression Scale were applied; as well as two Periodontal Evaluation Tools, and the Mini Nutritional Assessment Scale. Assessment for Visual and Auditory Impairment, Osteoporosis, Metabolic Syndrome and Prostate Cancer were performed. **Results:** 100 patients benefited from the interventions. A total of 111 elderly patients (ages 65-82 years) were registered, and 11 patients missed their appointment. Each patient was evaluated and given recommendations in 4 health specialties, and patients requiring a specialist or hospital care were referred to secondary and third care. **Conclusions:** Identifying areas of vulnerability in health care systems, and acquiring skills to achieve the highest health benefit with low budget restrictions in a multidisciplinary setting can improve global health practices among health sciences students.

**AUTHOR(S):** Deshinta Rosalina Puspitasari, Mia Astridivia, Khaula Sahida, Dewi Sri Handayani, Very Dwi Vasianti

**UNIVERSITY:** Universitas Indonesia, Department of Nursing

**TITLE:** Collaboration approach: inter-professional management of dementia to maintain quality of health in elderly

**ABSTRACT:** Over the past few years, the number of patients of dementia in Indonesia has increased rapidly. The dementia can make elderly patients more vulnerable to other health problem, so comprehensive treatment is needed. Managing people with dementia by implementation of inter-professional team approach include caregiving skill, clinical skill, and socio-behavioral are needed to improve patient outcomes with dementia. In Indonesia, there is still a lack of implementation studies in dementia care, particularly ones with an inter-professional intervention. The objective of this study is to

show the appropriate inter-professional intervention for managing older people with dementia. This study performed a narrative literature review by using online databases on ProQuest, Pubmed. These studies prove that health care providers have a vital roles to manage people with dementia such as physician must perform early assessment and early diagnosis, whereas nurse has a vital role to promote health, pharmacists must be aware for all the prescriptions from physician and medication therapy management, and psychologists should focus on Behavioral and Psychological Symptoms of Dementia (BPSD) management. The unity of health care providers can perform inter-professional collaboration to manage dementia people that can reduce the potentially adverse exacerbate of dementia and improve patients' outcomes so that the quality of life in people with dementia will increase.

**AUTHOR(S):** Ayako Kohno

**UNIVERSITY:** University of Malaya, Dept. of Social and Preventive Medicine, Faculty of Medicine

**TITLE:** How do Japanese retirees seek healthcare in Malaysia? - A qualitative study

**ABSTRACT: Background:** There is a growing popularity among Japanese retirees to spend retirement in overseas. Malaysia is one of the most popular destination for the Japanese retirees. Although trends for such international retirement migration (IRM) is increasing, there is limited academic research which focuses on healthcare of Japanese retirees in Malaysia. This issue entails an understanding on the factors affecting their healthcare seeking behaviours in a foreign country. **Objective:** The objective of this study was to identify the factors that affect the healthcare seeking behaviours among Japanese retirees in Malaysia. **Methods:** A total of 37 individuals consist of Japanese retirees, government officials, agents as well as Japanese language interpreters participated in this study. The Japanese retirees were recruited via convenient sampling from Japan clubs in Kuala Lumpur and Ipoh while others were from various public and private institutions. Data were collected using focus group discussions and in-depth interviews. Recorded discussions and interviews were transcribed and codings created using thematic analysis method. **Results:** Concepts such as seeking for alternative medicine, word-of-mouth information, reassurance from peer Japanese and selected insurance claiming methods are considered as dominant factors that are affecting the Japanese retirees' healthcare seeking behaviours. **Conclusions:** In this study, it was found that healthcare seeking behaviours of Japanese retirees are backed up with an informal safety net system which is voluntarily built among Japanese retirees in Malaysia, by creating a network of people. A specific intervention is desirable to correct any false information, and provide opportunities to attain accurate information about healthcare.

### **Concurrent Panel IV: Smoking**

**AUTHOR(S):** Suriah

**UNIVERSITY:** Hassanudin University, Faculty of Public Health

**TITLE:** The application of behavior intention to analyze smoking behavior of employees post implementation of a No Smoking Area

**ABSTRACT:** This study aimed to analyze the smoking behavior of employees after the implementation of the no-smoking area by using the concept of behavior intention on the theory of Snehandu B Kar. This research is a qualitative research with phenomenological design. Informants were selected by using the

snowball technique. We found eighteen employees at the mayor's office of Makassar. Data collected using in-depth interviews, observation and document analysis. Data validation was done by triangulation methods and member check. Data were analyzed using content analysis and presented in a narrative. The results showed that the informant has intention to change smoking behavior before the implementation of no-smoking area. Social support is obtained informant in the form of support information sourced from family, friends and superiors. Informants felt the ease of reaching information and facilities regarding no-smoking area. Personal autonomy in the form of a decision to change the behavior was experienced by the two informants. Action situation is the situation which prompted the informant to quit smoking that is triggered by the availability of warning boards are prohibited from smoking, and restrictions on the provision of facilities ashtray. Thus concluded that the smoking behavior of employees is determined by the intention, social support, accessibility of information and the action situation that affect personal autonomy allows employees to change their smoking behavior. This study suggested to disciplining an employee smoking behavior, and imposes sanctions for employees who smoke in the no-smoking area.

**AUTHOR(S):** Mahfuzur Rahman Bhuiyan; Mohammad Abdullah Al Mamun, Aatur Rahman Masud, Sohel Reza Choudhury

**UNIVERSITY:** National Heart Foundation and Research Institute, Mirpur, Dhaka, Bangladesh

**TITLE:** Knowledge, attitude and practice and risk perception on smoking and smokeless tobacco among female garments workers in Bangladesh

**ABSTRACT: Background:** Information on knowledge, attitudes and practice (KAP) and risk perception of female workers about smokeless tobacco (SLT) use are lacking in Bangladesh. This study was done to determine the KAP and risk perception of tobacco use among female garments workers in Bangladesh. **Design/ Methods:** The study was done in purposively selected 400 garments workers aged 15 years and above selected from Dhaka city. Data were collected using a pre-designed semi-structured questionnaire by face to face interview and were analyzed by using SPSS 17, Chicago, USA. **Results:** Respondents were 400 female workers with mean age of 21 years. Though none of them were smoker, 9.5% were current smokeless tobacco users. Among the users, all of them used zarda and 7.9% used gul. Tobacco addiction level for SLT use by modified Fagerstrom test among the respondents Low (score less than 4), medium (score 4-6), high (score 6 or more) were 22 (57.9%), 13 (34.2%) and 3 (7.9%) respectively. More than 95% respondents knew and believed that smoking causes stroke, heart attacks, lung cancer and COPD whereas 94% and more than 90% knew and believed that SLT use causes oral cancer and CVD. Half of the respondents knew about the tobacco control act in Bangladesh. Health care providers asked about smoking and SLT use in 4.7% and 19.5% cases respectively. 3.9% were advised to quit SLT use. Danger of using tobacco and quitting benefits were noticed mainly in television and posters, followed by newspaper. Advertisement or sign of promotion of tobacco product (53.2%, 34.2%, 28.0% and 17.8% for cigarette, zarda, biri and gul respectively) seen in point of sell and then television. In 10.2% and 34.0% home, smoking was allowed or had no rules. Workplaces were smoke-free. Among the respondents, 90% showed negative attitudes towards tobacco use, 60% SLT users showed negative attitudes. 52.6% SLT users had intention to quit but not within next 12 months. Seven of every ten respondents favor for increasing taxes on tobacco products. **Conclusion:** In spite of high knowledge and negative attitudes female garments workers were using smokeless tobacco, though the prevalence was much less compared to national female SLT use prevalence. Strong tobacco control law implementation in industries can reduce tobacco use among workers.

**AUTHOR(S):** Judith McCool

**UNIVERSITY:** University of Auckland, School of Population Health

**TITLE:** mHealth in the Pacific: a potential strategy to accelerate tobacco cessation?

**ABSTRACT:** Tobacco use is a primary risk factor underpinning the rise of non-communicable disease (NCD) in the Pacific region. Mobile phones have the potential to be transformative in this situation and are increasingly being used as an effective way of delivering health messages, with high penetration, and with the capacity for tailored messaging for diverse audiences. The University of Auckland has developed a fully automated motivational text message programme that helps smokers to quit (mCessation). This programme has been proven to be effective in high quality research trials in New Zealand and the United Kingdom. University of Auckland has recently partnered with the Samoa Ministry of Health and the Department of Health, American Samoa to adapt this mCessation programme for use in Samoa. This work will advance agreed WHO FCTC and the WHO NCD Targets, as well as country specific health priorities. Fundamentally, our research asks the following key questions: Can a mCessation programme be adapted for a Pacific setting ii) does a mCessation approach assist to increase tobacco quitting in country? iii) and can it be scaled up for whole of population benefit? Early evidence suggests high support for the use of mobile health in Samoa and American Samoa as a means to accelerate tobacco control, among other outcomes.

**AUTHOR(S):** Kartika Anggun Dimar Setio

**UNIVERSITY:** University of Indonesia, Department of Health Education and Behavioral Science

**TITLE:** A structural equation model of smoking behavior among undergraduate students at the Universitas Indonesia

**ABSTRACT:** This study examined the role of peers, parents, siblings, assertiveness, self-esteem, knowledge, prior trial smoking behavior, and advertising exposure as a predictor of smoking intentions in UI students. Structural equation modeling was used to assess the fit of a model that proposes a positive attitude toward smoking as a mediator of the association between independent variables and the smoking intentions. The proposed model provided a good fit for student smoking behavior model based on clump of science and sex. The results indicate that assertiveness and knowledge regarding the health effects of smoking are protective factors in smoking behavior. Meanwhile peers and prior trial behavior are behavioral risk factors in a person's smoking behavior. Our results show positive attitude toward smoking influence serves as mediator of person's smoking intention and the intention to smoke has a very strong relationship with smoking behavior.

**AUTHOR(S):** Indang Trihandini

**UNIVERSITY:** University of Indonesia, Faculty of Public Health

**TITLE:** The relationship between smoking as a modifiable risk factor and chronic complications on elderly with type 2 diabetes mellitus

**ABSTRACT: Introduction:** Smoking is known as a variable that can be changed through a specific intervention activity. Recently in Indonesia, research related to Chronic Complication among elderly with type 2 Diabetes Mellitus (DM) was not available. This research has objective in exploring the risk of smoking towards Chronic Complication among elderly with type 2 DM. Method: This research used

Riskesdas (Baseline Health Survey) in 2007. Riskesdas is a representative Indonesia Health Survey. 1565 elderly (aged 60++ years) with type 2 DM have selected by random. **Results:** 70-80% of the elderly have Chronic Complications and 32.11% of the sample is smokers. The elderly who smoke more than 24 cigarettes per day have risk 2.5 (95% CI, 1.54-3.97), smoker 1-12 cigarettes per day, and smoker 13-24 cigarettes per day have risk 1.3 and 1.6 respectively to get Chronic Complication compared with those who do not smoke, controlled by age, obesity, and physical activity. **Conclusions:** The proportion of smokers among elderly with type 2 DM is high, most of them are low education, low socioeconomic status, lack of access to the health services, low of physical activity, and low consume vegetables and fruit. Smoking increases the risk of Chronic Complication of type 2 DM.

## **Concurrent Panel V: Obesity/Nutrition**

**AUTHOR(S):** Helda

**UNIVERSITY:** University of Indonesia, Department of Epidemiology

**TITLE:** Association between abdominal obesity and Type 2 Diabetes Mellitus in Johar Baru Urban Village

**ABSTRACT:** Changing lifestyles was one of the risk factors to the increasing of the disease in community. The objective of this study was to investigate the association between abdominal obesity and type II DM in Johar Baru Sub-district, Central Jakarta. This is a cross sectional study, utilizing the data from the result of screening by MOH . The inclusion criteria was Johar Baru resident whom their ages more than 20 years. The result of multivariate analysis showed that the people with abdominal obesity (waist circumference  $P > 90$  Cm and  $W > 80$  cm) had 1.47 risk to get type II DM compared to the people who did not, after controlling for covariates, Included: Sex, BMI and Physical activity (PR= 1,47; 95% CI: 0,606-3,575). However, after including the interaction effect between abdominal obesity and physical activity, it is showed the people with abdominal obesity and light physical activity had the risk 7.59 (PR=7,59; 95% CI, 1,656 – 34,77) to get type II diabetes. The result of analysis showed, with intervention or prevention of abdominal obesity can prevent 23.98 % type II DM in community.

**AUTHOR(S):** SU Meifang<sup>1</sup>, WANG Congyun<sup>2</sup>, LI Songtao<sup>1</sup>, YING Xuhua<sup>1</sup>, ZHAO Qi<sup>2</sup>, FU Chaowei<sup>2</sup>, JIANG Qingwu<sup>2</sup>

**UNIVERSITY:** <sup>1</sup>Yuhuan County Center of Disease Control and Prevention, China; <sup>2</sup>School of Public Health, Fudan University

**TITLE:** Repeated cross-sectional studies on urine iodine and iodized salt consumption among school children in Eastern China

**ABSTRACT: Objective:** This study aimed to investigate the iodine status and its change among school-aged children in their morning urine and eating salt from 2012 to 2014 in Yuhuan County, Zhejiang Province, China. **Methods:** Three cross-sectional studies were conducted respectively in 2012, 2013 and 2014. Totally, 1343 out of 1350 eligible children aged 8 to 10 years old were involved into this study. Morning urine and salt consumed in their home were measured every year. Median and inter-quartile range (IQR) were used to describe the levels of urine and salt iodine. **Results:** The overall median of urine iodine was 116.0µg/L (IQR: 82.4-170.0µg/L), and no significant change was found over year

( $P=0.616$ ). The overall proportions of subjects with urine iodine less than  $50\mu\text{g/L}$ ,  $50\text{--}99\mu\text{g/L}$ , and equal to or more than  $300\mu\text{g/L}$  were 4.8%, 38.2% and 3.5%, respectively, and there were little differences over year ( $P=0.217$ ). An overall median of iodine from 1343 salt samples was 0.0 mg/kg (IQR: 0.0-1.8 mg/kg) and no year difference was statistically observed ( $P=0.164$ ). The proportions of subjects consumed iodized salt significantly decreased from 27.1% in 2012 to 25.1% in 2013 and to 16.0% in 2014 ( $P=0.000$ ). There was a significant difference in urine iodine between subjects taken iodized salt or not ( $133.5\mu\text{g/L}$  vs.  $112.0\mu\text{g/L}$ ,  $P=0.000$ ) and also a weak positive correlation between salt iodine and urine iodine (Spearman  $r=0.135$ ,  $P=0.000$ ). **Conclusions:** The iodine level was overall adequate and stable among school children and individuals without a sufficient iodine intake should be advised to take iodized salt.

**AUTHOR(S):** Hazreen Bin Abdul Majid

**UNIVERSITY:** University of Malaya, Centre for Population Health and Dept. Social and Preventive Medicine, Faculty of Medicine

**TITLE:** Participatory Action Research through negotiation and empowerment of the residents (PARTNER): Do they practice healthy dietary habits?

**ABSTRACT:** This study was carried out in urban community in Kuala Lumpur, Malaysia to determine the eating practice and healthy dietary habits among low income community. A survey was conducted in low income housing complexes from February 2012 until November 2012. A multistage cluster sampling design was used to select the participants for this study with total number of 1450 participants agreed to involve in the survey. From the survey, dietary practices including fruits and vegetables consumption and intakes of sweetened and carbonated beverages were analyzed. Based from the results, 86.7% consumed fruits and vegetables less than five times per day which considered unhealthy, while 11.7% consumed carbonated and sweetened drinks more than twice per day. From the logistic regression with confidence interval of 95%, participants with higher income were most likely to practice healthy dietary practice when being compared with those with lower income. The odds of participants with income of RM 5000 and higher were 5.9 times higher of practicing healthy dietary habits when being compared with those with income lower than RM 1000. Our results suggest that there is a need to improve the nutritional education regarding practicing healthy diet among low income urban community.

**AUTHOR(S):** Frances Tinker Larson

**UNIVERSITY:** California State University, Northridge

**TITLE:** Obesity trends in the Asia-Pacific Rim

**ABSTRACT:** Across the globe, metabolic syndrome and obesity are increasing. Most alarming is the rapid rate at which overweight children and young adults are developing non-communicable chronic diseases that will lead to early disability and death. This will create a significant global health burden for the working well. With this in mind, I will discuss important trends across the Asia-Pacific Rim and the need for more accurate assessment and comprehensive nutrition and lifestyle interventions.

**AUTHOR(S):** Nenita B. Panaligan

**UNIVERSITY:** Cavite State University, College of Nursing

**TITLE:** Effects of a home visit intervention on the level of compliance with dietary approaches to stop hypertension among hypertensive patients

**ABSTRACT:** Innovative approaches to facilitate access to health information towards voluntary adoptions of behavior among hypertensive patients can take place in various settings, either formally, informally or incidentally such as health centers, clinics, hospital, health maintenance organizations where health education for patients, their families, the surrounding communities can take place and where the training of health care providers have become a part of health care today. However, there are limited research on effectiveness of health education or any combination of health information dissemination experience at home. This study was conducted among hypertensive clients in selected barangays in Naic, Cavite to assess the effects of home intervention visits on the level of compliance to Dietary Approaches to Stop Hypertension (D.A.S.H.) diet, a recommended diet plan for adults suffering from abnormal blood pressure by the Philippine Society of Hypertension (PSH). This study utilized quasi-experimental designs specifically before and after design. A total number of 60 hypertensive patients (male and female, ages 40 years and above) were selected as treatment groups from who were divided into Treatment 1 - with once a week home intervention visits on DASH diet, Treatment 2- with twice a week home intervention visits on DASH diet and Treatment 3- with trice a week home intervention visits, conducted in eight weeks period of study. The included activities during home visits were showing of 5-minute video presentation about DASH diet, recommended personalized food exchange list and suggested dietary meal plan. Majority of the respondents were female, 50-54 years old, unemployed and obese. There is minimal level of compliance to D.A.S.H diet plan among the treatment groups. There is a slight relationship between the level of compliance of the treatment group 3 and their diastolic blood pressure level after eight weeks of home intervention visits. There was a significant relationship with the patient's compliance to D.A.S.H. diet plan and their caloric intake specifically among hypertensive patients who undergo visitations for thrice a week within the entire duration of the study. However, there has no significant difference between the level of blood pressure and BMI before and after home intervention visits about DASH diet among the hypertensive patients.

**AUTHOR(S):** Noran Hairi

**UNIVERSITY:** University of Malaya, Department of Social and Preventive Medicine, Faculty of Medicine

**TITLE:** Gender differences in the relationship between overweight/obesity and chronic pain among older people – Evidence from Malaysia

**ABSTRACT:** Overweight and obesity are issues of increasing prevalence among older people. Understanding gender differences allow us to decide whether evaluation of chronic pain should be part of the routine examination in obese older people, especially when women represents more than half of older people's population. The purpose of our study was to establish if there was any gender difference in the association between obesity and chronic pain among older people. We analysed a sub-population sample of 4954 older people aged 60 years and above, from Malaysia's Third National Health and Morbidity Survey (NMHS III). Chronic Pain and pain with interference were measured by self-report. Respondents body weight, height and waist circumference were measured by trained nurses and paramedics. The overall prevalence of chronic pain among our older people was 15.6%; higher in women than in men (18.4% vs 12.4%). Among older people with chronic pain, 88.3% experience pain with interference. Chronic pain was more frequently reported among overweight and obese respondents in this population. After adjusting for important confounders, abdominal obesity was significantly associated with chronic pain among older female with adjusted prevalence ratio (PR) 1.23 (95% CI 1.03, 1.47) but not among older male (aPR 1.16, 95% CI 0.93, 1.45). Our data suggested that chronic pain was commonly reported

among overweight and obese older people. There was gender difference in the association between overweight and obesity with chronic pain, where the association is significant among older women

## **Concurrent Panel VI: Child Health**

**AUTHOR(S):** Somsak Wongsawass

**UNIVERSITY:** Mahidol University, ASEAN Institute for Health Development

**TITLE:** Risk factors for early childhood caries (ECC) in Thailand: A qualitative study of parents and caregivers

**ABSTRACT:** Evidence from National Oral Health Survey showed situation of Early Childhood Caries (ECC) of preschool students is still problematical. This study aims to explore understandings of oral health perceptions and preventive measures towards caries of parents and caregivers of children aged 3-5 years old within its social contexts of urban and rural settings. The study was approved by Mahidol University (MU-SSIRB:2014/175). Three groups of samples were non-probabilistic selection from urban and rural communities. Focus group discussions were initiated by using semi-structured guidelines. A thematic content analysis was used to analyze data from audio recordings and field notes. All of participants defined that good oral health included the healthy teeth, gum, tongue and mouth without cavities, caries, and aphthae. Barriers were identified which included personal negative experiences, feeding practice, oral dental care such as tooth brushing, controlling of sweet and snacking particularly at home environment. Oral health literacy seemed play vital role in effective intervention programs between responsibilities of care-givers both at home and daycare center settings. Many parents expressed a need for more vital information about care advice and guidance. Dental services at primary care level should be made available at ease. Parents and caregivers expressed their interest in participating to intervention program. Caregivers at Day care centers have encountered with barriers by implementing no sweet/candy in kids' bag and pockets. Oral health promotion should include village health volunteers to disseminate information and practical advice to community at large.

**AUTHOR(S):** Oscar Taméz Rivera, Dulce M Rivero-Arias and Oscar Valencia-Urrea.

**UNIVERSITY:** Tecnológico de Monterrey, School of Medicine

**TITLE:** Factors associated with an incomplete immunization scheme in children younger than 18 months: A case-control study in urban and rural areas of Mexico

**ABSTRACT: Background:** The development and use of vaccines has been a proven cornerstone in reducing child mortality worldwide. According to the Centers for Disease Control and Prevention (CDC), the last decade has been characterized by an important reduction in cases, hospitalizations, deaths and costs associated to vaccine-preventable diseases in the United States. Despite Mexico's significant progress regarding immunization coverage, there are still many parts of the country with a high prevalence of incomplete vaccination schemes. **Objective:** The objective of this study was to identify the factors associated with having an incomplete immunization scheme in children younger than 18 months in urban and suburban areas of Mexico. **Design/Methods:** This was a prospective, cross-sectional case-control study of 178 subjects younger than 18 months from urban and suburban areas of northeast Mexico. The sample is non- probabilistic, calculated with a 2:1 controls-to-cases ratio. The data were

collected by standardized staff through a survey that explored socio-demographic and economic variables. Low socioeconomic status was defined as an income lower than 5,000 Mexican pesos. Medium scholarship was defined as having reached middle or high school. Biologics shortage was defined as the lack of vaccine at the time of the subject's visit for vaccination. **Results:** Mean age was 3.6 months, 60.1% were men, and 48.3% were first-born. Around 63% had a low socioeconomic status ( $p = .032$ ). Only 9.6% of the mothers were  $\leq 17$  years old; 10.1% were single and 21.9% worked outside home ( $p = .024$ ). Medium scholarship was reached by 75.3% of the mothers and 73.6% of the fathers. Biologic shortage as a cause of an incomplete immunization schedule was reported by 35.3% of the caregivers ( $p = < .001$ ). This association was the only one that persisted despite adjusting for confounding variables (odds ratio (OR) = 5.20, 95% confidence interval (CI) = 2.66-10.1;  $p = < .001$ ). **Conclusions:** This study demonstrates that biologics shortage is associated with having an incomplete immunization schedule in subjects younger than 18 months. This finding should be considered a red flag for health services in Mexico, as well as an area of opportunity to reduce child mortality due to vaccine-preventable diseases. Further research is required in order to identify and address the factors that influence childhood immunization.

**AUTHOR(S):** Narila Mutia Nasir

**UNIVERSITY:** Syarif Hidayatullah State Islamic University, Faculty of Medicine and Health Sciences

**TITLE:** The influence of mother classes on awareness of newborn danger signs in Tangerang Selatan District, Banten, Indonesia

**ABSTRACT:** Being aware of danger signs in newborn is essential toward improving infant survival. One essential antenatal education activity that promotes maternal and newborn health is the mother class. This study intended to assess how this class influences mother's awareness of newborn danger signs in Tangerang Selatan District, Banten Province, Indonesia. Utilizing mother class as the health intervention, a quasi-experimental study was conducted in the community. 427 pregnant mothers, divided into intervention group ( $n=214$ ) and control group ( $n=213$ ), were interviewed using structured questionnaires. Pre-test and post-test were conducted. The study revealed that during pretest, only 24.3% of the mothers in the intervention group and 23.9% from the control group recognized that the yellowing of the baby's skin (jaundice) is a danger sign. However, the awareness increased to 50% (intervention) and 27.2% (control) afterwards during the post-test. Similarly, only 3.3% (intervention) and 2.8% (control) knew that poor infant sucking is a danger sign. After the intervention, the awareness increased to 21.9% (intervention) but only 5.2% increased in the control group. A chi square test resulted to a significant effect of mother class in improving overall awareness on newborn danger signs ( $p < 0.001$ ). Early detection of newborn danger signs may help to prevent the fatal outcome. Mother class has positively increased the awareness and might play an important role enhancing the quality of newborn care.

**AUTHOR(S):** Aditi Krishna<sup>1</sup>, Juhwan Oh<sup>2</sup>, Jong-koo Lee<sup>2</sup>, Hwa-Young Lee<sup>2</sup>, Jessica M. Perkins<sup>3</sup>, Jongho Heo<sup>4</sup>, Young Sun Ro<sup>2</sup> and S.V. Subramanian<sup>1</sup>

**UNIVERSITY:** <sup>1</sup> Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA, USA; <sup>2</sup> JW LEE Center for Global Medicine, Seoul National University College of Medicine, Seoul, Korea; <sup>3</sup> Department of Health Policy, Harvard University, Cambridge, MA, USA; <sup>4</sup> Public Health Joint Doctoral Program, San Diego State University & University of California, San Diego, CA, USA

**TITLE:** Short-term and long-term associations between household wealth and physical growth: a cross-comparative analysis of children from four low- and middle-income countries

**ABSTRACT: Background:** Stunting, a form of anthropometric failure, disproportionately affects children in developing countries with a higher burden on children living in poverty. How early life deprivation affects physical growth over various life stages is less well-known. **Objective:** We investigate the short- and long-run associations between household wealth in early life with physical growth in childhood in four low- and middle-income countries to understand the persistent implications of early life conditions of poverty and resource constraints on physical growth. **Design:** Longitudinal study of eight cohorts of children in four countries Ethiopia, India, Peru, and Vietnam (n= 10,016) ages 6 months to 15 years, using data from the Young Lives project, 2002-2009. Physical growth outcomes are standardized height-for-age z-scores (HAZ) and stunting. The key exposure is household wealth measured at baseline using a wealth index, an asset-based indicator. Covariates include child's age and sex, caregiver's educational status, household size, and place of residence. **Results:** Baseline wealth index is significantly associated with higher physical growth rates as suggested by higher HAZ and lower odds of stunting. We found these associations in all four countries, for younger and older cohorts and for children who experienced changes in living standards. For the older cohort, despite the timing of the first survey at age 78 years, which is beyond the critical period of 1,000 days, there are lasting influences of early poverty, even for those who experienced changes in wealth. **Conclusions:** Household wealth in early life matters for physical growth with conditions of poverty and deprivation influencing growth faltering even beyond the 1,000 days window. The influences of early childhood poverty, so prevalent among children in low- and middle-income countries, must be addressed by policies and programs targeting early life but also focusing on older children experiencing growth faltering.

## **Concurrent Panel VII: Occupational Health & Safety**

**AUTHOR(S):** Evi Martha

**UNIVERSITY:** University of Indonesia, Department Health Education and Behavioral Science, Faculty of Public Health

**TITLE:** Improving Knowledge Attitude and Practice (KAP) of breeders, animal sellers, and slaughter workers to prevent zoonotic disease transmission in Sawangan Sub-District, Depok, Indonesia

**ABSTRACT:** Breeders, animal sellers, veterinarians, and slaughterhouse workers are having high risk to zoonotic disease due to their frequent contacts with animals. A preliminary study showed that the knowledge and practice of breeders, sellers and slaughter workers at Depok are still low. About 58% of sacrificial animal sellers in Depok perceived that animal diseases could not be transmitted to humans. The objective of study to improve KAP Breeders, Animal Sellers, Slaughter Workers in preventing zoonotic diseases. The study involved 36 respondents in Sawangan Sub-District, Depok. Measurement and training activities had been conducted in July to November 2014. Two measurements and observation of practices were done twice during the feast of sacrificing of goat and cow in Eid Al Adha. The training revealed that knowledge of breeders improved by 53.4% as well as animal sellers (31.7%) and slaughter workers (32.1%). The attitude of breeders was also improved 23.75 %, animal sellers 8.1 % and slaughter workers 9.9 %. In addition, the training also impacted the changes in target's practices toward good practices. It is concluded that training could improve the KAP of the respondents. This study suggested that training for breeders, animal sellers and slaughter workers should be followed up by continuously collaboration between The Animal Husbandry Office and Health District Office to enhance more effective reduction of zoonotic diseases transmission.

**AUTHOR(S):** Indri Haapsari

**UNIVERSITY:** University of Indonesia, Department of Occupational Health and Safety

**TITLE:** The combination of visual, cognitive, and physical motor skills, includes driver risk perception as risk factors for driver performance

**ABSTRACT:** The Road Safety Program in Fukuoka City is one of the ways to prevent accidents related to visual and physical fitness skill factors. Visual skill also has correlation to cognitive and judgmental factors. Similarly, physical skills related to fitness have correlation to driving operations. Driving is a complex task involving integration of visual, cognitive, and psychomotor skills. Method of this research was cross sectional study that used data from previous study that was about visual skill, cognitive skill, physical motor skill, and driver risk perception. Subjects selected were only those who completed all experiments. Young drivers were 7 person and the elderly were 21 persons. Instrument of this study were the Kinetic Vision Tester (Model: Kowa AS – 4c); the Trail Making Tests (TMT) A & B and the Traffic Sign Test. Physical motor skill was measured in two ways: grip strength was assessed by a dynamometer and the tapping test recorded hand responses , DSI made out the Driver’s Stress Intention while driving, and the Driver Coping Questionnaire (DCQ). There were no combinations and contributions found when considering all risk factors (visual, cognitive, and physical skill), including DRP, as independent variables related to driving performance. On the other hand, several risk factors are correlated; however, explaining the nature and degree of the correlation or contribution objectively is not easy.

**AUTHOR(S):** Orapin Laosee

**UNIVERSITY:** Mahidol University, ASEAN Institute for Health Development

**TITLE:** Assessment of the basic infrastructure needed to enhance swimming skills for rural children of Thailand

**ABSTRACT:** Drowning has been reported to be a critical health problem in Thailand. It’s almost exclusively a problem in rural area where the majority of populations live. Thai National Injury Survey showed that about 2600 young Thai children drown each year. Most drowning deaths occur in natural water bodies such as ponds, ditches, lakes, rivers or the sea, accounting for 76% of drowning death. To facilitate swimming skill of children, infrastructure plays as a crucial role. This study describes the infrastructures to enhance swimming skill for children in the rural areas of Thailand. A cross-sectional descriptive study was conducted in 12 rural communities of Thailand. Simple random sampling was employed to identify the guardians of primary school children in targeted areas. A sample of 633 guardians who has at least one child 6-12 years old or studying in grade 1-6 was interviewed. The study revealed that majority (76%) of rural primary school children could not swim while most of them (82%) have never attend any formal swimming lessons. Assessing of basic infrastructures found that there is lack of swimming instructors to conduct a swimming program, while lack of clean natural water bodies for children to learn to swim and no swimming lessons in schools. Most of the guardians (93%) felt that children should be taught to swim after age of five and perceived the risk of drowning to be high. There are no specific policies related to water safety issues in the community. The study results highlighted that there is a need to improve such the basic infrastructures to increase swimming skill in children to prevent drowning. Strategies to establish a swimming program in particular community where existing resources are available should be started.

**AUTHOR(S):** Lassie Fitria

**UNIVERSITY:** University of Indonesia

**TITLE:** Contractor Safety Management System (CSMS) Review as First Requirement in production service Project in Oil and Gas Industry

**ABSTRACT:** Contractor Safety Management System (CSMS) Review as basic requirement for contractor qualification in Oil and Gas Industry project based on Occupational Health Safety (OHS) Management implementation. There are 9 elements in CSMS should be completed by contractor to pass job qualification. CSMS divided into 3 job category based on risk are job with low risk, medium risk and high risk. This study reviewed OHS management by using CSMS Sheet scoring and interviewed HSE officer and Project Leader. This review was performed as long as 1 month, for oil production project in Technical Assistance Contract (TAC) Company of Indonesia's National Oil Company. There were 23 contractors (International and national company) that participated in 7 kind of jobs for production service project. To complete CSMS Sheet scoring, contractors should submitted evidence of OHS system implementation in their company. Scoring performed based on completion of evidences and interview. In production services, there were 2 jobs with low risk category, 4 jobs with medium category and 1 jobs with high risk category. Generally, CSMS scores presented between 38.2-83.2, more than 90.9 % contractors passed the CSMS review, the highest scoring based on CSMS sheet was 83.2%, it was contractor with high risk, more than 90% evidence documents was completed. Contractors who participated in this project have participated in CSMS review in owner company before, that the process of the review was more difficult and performed site visit. Based on CSMS, there was different OHS implementation between International and National Contractors.

## ABSTRACTS FOR POSTER PRESENTATIONS

**AUTHOR(S):** Azimatun Noor Aizuddin

**UNIVERSITY:** Universiti Kebangsaan Malaysia Medical Centre

**TITLE:** Malaysian ability and willingness to pay for healthcare in establishing a future National Health Financing Scheme

**ABSTRACT: Introduction:** As the healthcare expenditure is further inflated, all societies in the world, especially in developing countries faced with in their health care systems pressure to contain escalation of health care cost even in Malaysia. Currently, Malaysian healthcare is finance by the government. Therefore, Malaysia needs one healthcare financial scheme to solve these problems. The study objective is to study the ability (ATP) and willingness to pay (WTP) of household to contribute to National Health Financing Scheme (NHFS). **Method:** It was a cross sectional study involving household addresses from 4 states that have been selected using multistage random sampling. Face to face interviewed using a validated structured questionnaire were conducted. **Results:** Majority (86.6%) of respondents able to pay for their healthcare. Majority (63.7%) of the households willing to pay extra than usual for government health care services but most (83.3%) of them not willing to pay extra than usual for private health care services. Majority of household (91.2%) agreed that NHFS should be established. Majority (82.2%) of the households willing to contribute to NHFS 0.5-1.0% of their monthly salary deduction. Majority of households (70.9%) willing to contribute 1.0-2.0% of their monthly income to NHFS to gain access to

both public and private healthcare basic services. The factors that were found to have significant associations with ATP, WTP for healthcare and WTP for NHFS was ethnicity, education, income and choice of healthcare services. **Conclusion:** Establishing National Healthcare Financing Scheme in the future for Malaysia was very much possible.

**AUTHOR(S):** Ray-E Chang

**UNIVERSITY:** National Taiwan University, Institute of Health Policy and Management

**TITLE:** Exploring the association between changes in dialysis reimbursement policies and the short-term technique failure of peritoneal

**ABSTRACT: Context:** Peritoneal dialysis (PD) has been believed to be a more cost effective treatment of end-stage renal disease (ESRD) than hemodialysis (HD). The promising benefits of PD treatment over HD influenced public policy makers in Taiwan to seek ways to increase the utilization of PD. This study evaluates the impact of their policy initiatives. **Methods:** This study was an observational longitudinal cohort study and used a pre-post policy analysis of matched PD patients and a matched HD control group to assess the impact of Taiwan's efforts to increase the utilization of PD for the treatment of ESRD patients. The competing risk regression approach for survival analysis was employed to examine the occurrence of technique failure and mortality. **Findings:** This study found that the PD incentive policies did have the desired affect albeit the degree of change was modest. At the same time this increase in PD utilization was accompanied by an increase in technique failure and an increase in mortality. **Conclusions:** Incentives to change physician practice behaviors and the acceptance of new treatment modalities that may offer improved benefits to patients need more disciplined and carefully managed implementation efforts. Changing attitudes and practice behaviors of physicians, patients and their caregivers must include training and education as part of the policy package.

**AUTHOR(S):** Yi-Chen Chou, Ho-Tang Liao, Chang-fu Wu

**UNIVERSITY:** National Taiwan University

**TITLE:** Analysis of PAHs by thermal desorption GC/MS in airborne particles

**ABSTRACT:** Air pollution is an important environmental issue. Fine particulate matter (PM<sub>2.5</sub>) is one of the most common air pollutants caused by human activities. PM<sub>2.5</sub> comprises many organic species, including polycyclic aromatic hydrocarbons (PAHs). PAHs are typically produced during incomplete combustion; typical sources include motor vehicles, diesel engines, wood burning, cigarettes, and cooking. These organic compounds have been considered to be atmospheric contaminants and human carcinogens. To monitor PAHs in PM<sub>2.5</sub>, PM<sub>2.5</sub> samples are first collected on quartz filters. Then the chemical analytical approach is used to measure the concentration of PAHs. The conventional approach for analysis of aerosol organics is to extract aerosol materials with organic solvents and analyzed by GC/MS (gas chromatography/mass spectrometry). However, this approach requires pre-analysis treatment (e.g., solvent extraction, volume reduction), which is usually time-consuming. Using a large quantity of solvents may also cause possible contamination. An alternative approach is the thermal desorption (TD) coupled with GC/MS analysis. By employing TD-GC/MS, only a small portion of samples is needed and pre-analysis treatment is not required. In this study, we developed a TD-GC/MS method that allows simultaneous analysis of multiple PAHs in PM<sub>2.5</sub> samples. NIST SRM 2260a were used as calibration curve standards for target PAHs. We attempted to adjust different heating programs to optimize TD GC-MS operative parameter to reduce the analysis time and improve the efficiency. The preliminary results showed that the sample that we collected in an urban environment contain multiple PAHs, including

Naphthalene, Biphenyl, Acenaphthylene and Coronene. Their concentration were 3.8 ,0.52,0.04 and 0.03 ng/m<sup>3</sup>, respectively.

**AUTHOR(S):** Er Ah Choy, Norhasnita Bt Abd Samad, Fairus Bt Yahaya

**UNIVERSITY:** National University of Malaysia, School of Social and Environmental Development, Faculty of Social Sciences & Humanities

**TITLE:** Effectiveness of the Communication Behavioural Impact (COMBI) Programme in combatting Dengue

**ABSTRACT:** Dengue hemorrhagic fever is transmitted by the bite of female Aedes mosquito infected with dengue virus need to be addressed holistically and comprehensively. Thus, eliminate mosquito breeding sites is a key strategy in the fight against the epidemic. To eliminate mosquito breeding sites and to combat the epidemic requires a strong commitment from the government and cooperation from the community. Communication Behavioural Impact (COMBI) is an advocacy programme used by the Malaysian government in an effort to prevent and control dengue. Seremban District Health Office plays an active role in advocating locality to establish COMBI the high dengue cases was recorded. The result of this study shows local community involvement in setting up COMBI committees. The establishment of COMBI has a direct relationship with the statistics of Dengue. COMBI activities by local community to control and reduce dengue cases in Seremban District. Qualitative method was used to collect data from the local community. In addition, the secondary data was collected from the Vector Unit and the Environmental Health Promotion Unit, Seremban District Health Office (PKDS).The primary data was collected via the interviews, focus group discussions (FGD) and field observations and also from key informants from five PKDS officer and 10 COMBI committee members. COMBI committee distributed educational material such as leaflet, banner and conducted talks, exhibition, demo, dialogue and clean-up of their areas

**AUTHOR(S):** I Wayan Darwata et al.

**UNIVERSITY:** Warmadewa University, Department of Public Health

**TITLE:** Community survey on blood pressure and serum levels of Glucose, Cholesterol, and Uric Acid among people 45 years old and above

**ABSTRACT:** The objective of the survey was to examine blood pressure and serum levels of glucose, cholesterol, and uric acid among people aged 45 years and above in the rural villages (desa) of Samplangan, Pejeng, and Petak, Gianyar Regency, Bali. Overall, a total of 650 people (216 males, 434 females) were examined in a non-fasting state. Blood pressure was measured by mercury sphygmomanometer (Nova), while serum levels of glucose, cholesterol, and uric acid were assessed by rapid test method using Easy Touch CGU apparatus. Each parameter was categorized as “high” and “normal” (blood pressure high:  $\geq 140/90$  mmHg; cholesterol high:  $\geq 200$ mg/dl; blood glucose high  $\geq 200$ mg/dl; uric acid high:  $>7.0$  mg/dl, while other measurements below those values respectively were categorized as “normal”). Results of the study showed that of 650 people examined, 22.8% had high blood pressure; 9.4% high blood glucose, 42.0% high serum cholesterol, and 26.3% high serum uric acid. Overall analysis by gender showed that compared to females, males had higher ratios of high blood pressure, high blood glucose, high serum cholesterol, and high serum uric acid. All findings, either overall, by gender, or by village, consistently indicated that high serum cholesterol was most frequently found among the rural people studied.

**AUTHOR(S):** Kartika Anggun Dimar Setio

**UNIVERSITY:** University of Indonesia, Department of Health Education and Behavioral Science

**TITLE:** “Not On Tobacco” Program to help teenagers quit smoking in Depok, West Java, Indonesia

**ABSTRACT:** The number of teenage smokers in Indonesia is considered the highest in the world.

However, no specific adolescent smoking cessation program is currently available in Indonesia. Therefore, in 2013, Universitas Indonesia in collaboration with District Health Office and District Education Office of Depok City developed a collaboration project, called Not On Tobacco (NOT) Program targeting senior high school students. The program was conducted in four senior high school schools in Depok, two in intervention group and others in control group. The intervention group received full intervention from NOT program one session per week for six weeks. Two other schools which were in control group received a brief intervention using self-help handbook for students’ reference in smoking cessation. The recruitment of students was carried out on voluntary basis, with 67 students committed to follow the entire sessions. Our results indicate that there was a significant changes in the level of addiction of students in the intervention group ( $p < 0.05$ ); whereas no significant change in the level of addiction was shown in control group ( $p > 0.2$ ). In addition, there was a significant change in the average number of cigarettes consumed by students from the intervention group from 4.85 to 3.04 ( $p < 0.05$ ); while no significant change was shown by students in control group, before and after the provision of self-help handbook ( $p > 0.2$ ). Moreover, the quit rate in control group is 22%, higher than in the intervention group which quit rate is only 14%.

**AUTHOR(S):** Ming Moy Foong

**UNIVERSITY:** University of Malaya, Social & Preventive Medicine

**TITLE:** Workplace wellness program and blood pressure: results from a six-year follow-up study

**ABSTRACT: Introduction:** Workplace health promotion is important in prevention of chronic diseases among employees. Previous workplace wellness programs showed to offer a number of benefits such as lowered disease prevalence, reduced medical costs and improved productivity. This study aims to evaluate the impact of a 6-year workplace wellness program on employees’ blood pressure. **Methods:** In this prospective cohort study, we included 1,365 employees enrolled in the workplace wellness program, conducted during 2008-2013. Participants were permanent employees above 35 years old, with at least one follow up measurements and no reported hypertension medication change during the study period. Baseline socio-demographic information was collected using a questionnaire while anthropometry and resting blood pressure measures were collected during annual health screening. Changes in blood pressure over time were analyzed using linear mixed model. **Results:** The systolic blood pressure in the hypertension subgroup decreased 2.36 mm Hg per year. There was also significant improvement in systolic blood pressure in the at risk of hypertension subgroup (-0.75 mmHg). The diastolic blood pressure among the hypertensive and at risk subgroup improved 1.76 mm Hg/year and 0.56 mm Hg/year, respectively. However, the healthy subgroup did not show improvement in their blood pressure over the 6-year period. **Conclusion:** This study showed that repeat engagement in annual health screening is critical for early detection of hypertension and has the potential to significantly improve blood pressure levels especially among hypertensive and employees at risk of hypertension.

**AUTHOR(S):** Milla Herdayati

**UNIVERSITY:** University of Indonesia, Faculty of Public Health

**TITLE:** The effects of female participation in the family economy on exclusive breastfeeding in Indonesia

**ABSTRACT:** Breastfeeding is a primary step for optimal health and growth of the child. The first thousand days of life, which began in the fetus in the womb until the child is two years old is the most important period and the need to get the most attention. This study aims to determine the relationship of the mother's participation in the economy of the family to exclusive breastfeeding. The design study is cross sectional with secondary data IDHS 2012 with a sample of 1358 amounted to 15-49 year-old mother who has a 0-5 month old baby. Participation of mothers in the family economy can lower the chance of exclusive breastfeeding that mothers who work as laborers/employees at all times to 1.54 times more risky not to give exclusive breastfeeding than mothers who do not work after being controlled by the variable confounder ( $p = 0.038$ ; 95% CI = 1.0 to 2.3). Provide information regarding the governance of exclusive breastfeeding for working mothers, improving cross-sectoral cooperation with relevant ministries weeks to increase exclusive breastfeeding programs in accordance with the legislation that has been made, as well as carry out supervision and punishment/reward on the implementation of the regulation on exclusive breastfeeding

**AUTHOR(S):** Rozita Hod

**UNIVERSITY:** National University of Malaysia, Department of Community Health

**TITLE:** Occupational accidents in selected small and medium industries and its associated factors

**ABSTRACT: Introduction:** Rapid industrialization with the advances in science and technology has resulted in extensive and accelerated economic development in Malaysia. The risk of occupational accidents, injuries and diseases has also increased along with the economic growth. Workers are the main backbone of any organization. In Malaysia small and medium industries (SMI) are one of the major contributors to the national economic growth. Workers in this domain are vulnerable to occupational accidents. This study aimed to determine the percentage of occupational accidents and the various risk factors associated with it. **Methodology:** This study was conducted in Selangor, one of the main areas that experience rapid urbanization and industrialization. In this cross sectional study, self-administered questionnaire solicited responses regarding socio-demographic factors, individual factors, organizational factors and information on occupational accidents among the 300 respondents. **Results:** A total of 300 workers from SMI in Selangor, Malaysia, participated in this study. The age range was 16 to 55 years old, with mean of 29.9 and standard deviation of 9.8. Majority of the workers were female (185 respondents or 61.7%) . Among these workers, 128 (42.7%) had experienced occupational accidents. Factors that were found to be significantly associated with the occurrence of occupational accidents were age and employment period. **Discussion:** This study found that the most significant risk factors for SMI food manufacturing are the age of the workers and employment period. **Conclusion:** The cultivation of safety culture among young and new workers must be emphasized in order to reduce the risk of occupational accidents.

**AUTHOR(S):** Victor CW Hoe<sup>1</sup>, Bahrulmazi Edrak<sup>2</sup>, Mohd Yusof Kasim<sup>3</sup>, Nor Pujawati Mohd Said<sup>4</sup>

**UNIVERSITY:** <sup>1</sup> Centre for Occupational and Environmental Health-UM, Department of Social and Preventive Medicine, University of Malaya, Kuala Lumpur; <sup>2</sup> iCOOP College Malaysia, Selangor; <sup>3</sup> Insaniah University College, Kedah; <sup>4</sup> Universiti Utara Malaysia, Kuala Lumpur

**TITLE:** Public health issues among the Cham-Malay community in Cambodia

**ABSTRACT: Introduction:** Cham-Malay is one of the minority ethnic groups in Cambodia. The survey objective is to assess the public health issues including housing, water supply and waste management among this community. **Methods:** The head of household or his/her representatives were surveyed using an interviewer administered questionnaire. The survey was conducted between September 2014 and January 2015. The means and standard deviations (SD) of normally distributed continuous variables and the median and inter-quartiles ranges of skewed variables are presented. **Results:** 352 household were surveyed, consisting of community from Kampong Cham (47.4%), Phnom Penh (38.4%), Siem Reap (7.7%), Tbong Khnum (4.0%) and others. All the surveyed families are Muslims. Most of the household are nuclear families (92.3%), with an average family size of 5.10 (SD 1.84). Most of the families stayed in detached house (60.8%), followed with teres (23.3%) and boat-house (15.6%). Most of the houses have on stilt (58.5%) and have only one or less rooms (59.1%). A large portion of the household used wood-stove (76.9%) and have electricity supplied by electricity board (81.3%). River water is the main source of water for cooking/drinking (50.3%) and washing/bathing (51.4%), followed with piped water, 47.7% and 46.9% respectively. Most families boiled water (90.1%) before drinking. The main methods of waste disposal was burning the waste (46.6%) and throwing into the river (39.5%). **Conclusion:** The survey identified certain public health issues among the Cham-Malay community in Cambodia. Future intervention programmes should include methods to address these issues.

**AUTHOR(S):** Qiaoyun Huang

**UNIVERSITY:** Fudan University; Kunming Medical University, Schools of Public Health

**TITLE:** The relationship between economic status and health status in China, Vietnam, Laos, and Ghana

**ABSTRACT: Introduction:** Health Status is not only influenced by individual behaviors, genetics, and environmental factors, but also by socioeconomic and health investment factors. This study aims to explore the relationship between economic status and health status from a global health perspective. **Objective:** We analyzed trends of the under-five mortality rates in China, Ghana, Laos and Vietnam from 1995 through 2012, and explored the relationship between these trends and economic factors in these countries. **Methods:** We used data from the WHO and World Bank to compare under-five mortality rates of China, Ghana, Laos and Vietnam between 1995 and 2012. **Results:** Under-five mortality rates of all four countries declined between 1995 and 2012, with the largest relative declines in China (-70.83%), followed by Laos (-47.14%) and Vietnam (-40.48%) and Ghana with the smallest decline (-29.82%). GDP per capita of all four countries increased between 1995 and 2012, with the largest annual growth rate in China (14.56%), followed by Vietnam (11.22%) and Ghana (8.91%) and Laos (8.32%). The average annual under-five mortality rate differed for all four countries even within the same GDP range. The lowest under-five mortality rate was in Vietnam, followed by China and Ghana, and the highest was in Laos.\* **Health expenditure has differing effects on the improvement of health status especially in less economically developed areas/periods. Conclusion:** The economic and health status of four countries has been improved by varying degrees over the past 18 years. We can draw from the successful experience of these countries to improve the health status in other similar countries.

**AUTHOR(S):** Jorge A Martinez Cardona

**UNIVERSITY:** Instituto Tecnológico y de Estudios Superiores de Monterrey

**TITLE:** Using videoconferencing systems in the "Morning Report" in the specialty of pediatrics for the first time

**ABSTRACT:** The "Morning Report" is a daily activity that medical residents exposed cases that occurred during his shift, our pediatric training program has 4 hospitals located: two private and two of them in the public system, with the this study linked the impact of this activity through a videoconferencing system on the 4 institutions and thus exposing residents to the major pathologies of these institutions increased analyzed. By anonymous surveys participants were questioned about their opinion of the new system; we confirm acceptance for implementing 82% of residents surveyed compared to 18% among those considered unimportant measure this is why the use of technology to enhance the learning experience is growing day by day, general purpose tools bidirectional communication become very attractive in order to enrich one of the most important activities of the resident.

**AUTHOR(S):** Martya Rahmaniati Makful

**UNIVERSITY:** Universitas Indonesia, Faculty of Public Health

**TITLE:** Spatial model of accessibility of health care for TB patients

**ABSTRACT:** Tuberculosis is one of the major health problems in developing countries. According to analysis conducted by Riskesdas 2013, the two highest pulmonary tuberculosis are are West Java (0.7%) and Papua (0.6 %). The aim of this study is a model of spatial access to health services diagnosis of Tuberculosis patients in West Java province and the province of Papua and determine the pattern of access to health services for TB patients. This study uses data derived from Riskesdas 2013, the Indonesian Health Ministry. Using a statistical approach to spatial, /Geographically Weighted Regression/ (GWR) and using the Index Moran to see the pattern of spread of access to health services. Health Care Access includes individual variables, health facilities, infrastructure. Based on the value of the index's Moran, access to health services in the province of West Java showed a pattern that spreads and have the same characteristics at a nearby location. Meanwhile, in the province of Papua showing patterns clustered and there's no spatial interaction. The model equations GWR access to health services is influenced spatially by economic, using health insurance, transportation, travel time, meanwhile in the province of Papua, which formed the model equations are age, the economy, travel time, Clinic of microscopic TB and hospital number. There's a Differences in spatial model of access to health services diagnosis of TB patient in the province of West Java and Papua. Access to health services should be provided by the government so that people can easily get the health services.

**AUTHOR(S):** Azmawati Mohammed Nawi

**UNIVERSITY:** Universiti Kebangsaan Malaysia, Department of Community Health

**TITLE:** Accuracy of self-reported smoking among adolescent with the urine cotinine strip test

**ABSTRACT: Introduction:** Prevalence of smoking among adolescent were varies in our local setting as they were merely based on self-reported without validation of any biomarkers. The objective of this study is to determine the accuracy of self-reported smoking as compared to urine cotinine strip test among adolescent. **Methods:** A cross-sectional study was performed among 314 adolescent aged 16 years old from February to April 2015 in Putrajaya. Accuracy of the self-reported was assessed using a data collection sheet and validated by the urine cotinine strip test. Three schools were chosen by simple random method where all of its Form Four students became the sample unit. Kappa statistic was used for the agreement. **Results:** The self-reported have a substantial agreement with the urine cotinine strip test with Kappa value of 0.757 (CI 95% 0.63, 0.88) with the overall agreement was 95.86%. The prevalence of smoking based on self-reported was 8.0% (CI 7.47, 8.53) while according to the urine cotinine strip test, it was 10.8% (CI 95% 10.20, 11.41). Among the respondents who claimed to be smoker, 8.0% have

the discrepancy with the urine cotinine strip test while for the respondents who claimed to be non-smoker, 3.8% had discrepancy with the urine cotinine strip test. The sensitivity and specificity of the self-reported against the urine cotinine strip test was 67.6% and 99.3% respectively with PPV of 92.0% and NPV of 96.2%. **Conclusion:** Self-reported can used to assess the smoking status but need to be used cautiously among the adolescent. By validating the self-reported with the urine cotinine strip test, the true prevalence of smoking among adolescent can be truly measured.

**AUTHOR(S):** Nenita B. Panaligan

**UNIVERSITY:** Cavite State University, Faculty of Nursing

**TITLE:** Effectiveness of creative arts therapy in developmental status of toddlers in selected barangays in Indang, Cavite

**ABSTRACT:** During the toddler period, children accomplish a wide array of developmental task and change from largely immobile and pre verbal infants who are dependent on caregivers for the fulfillment of most needs to walking, talking young children in a growing sense of autonomy (independence). Creative Arts Therapy had been used to children with mental disabilities to promote psychological health and social support. They offer children “a way to express their feelings, perceptions, thoughts, and memories in ways that words cannot” according to Malchiodi (2005). The research study entitled “Effectiveness of Creative Arts Therapy in developmental status of toddlers in selected barangays in Indang, Cavite” was conducted to determine the effectiveness of creative arts therapy such as arts (drawing), music, dance and play in the developmental status of normal and well toddlers. It aims to evaluate the difference it can create in the Social, Behavioral and Cognitive aspects of development after the administration of the therapies. Sixty children ages 12 months to 3 years old, who are not yet enrolled in school were purposely selected from Alulod, Buna Cerca and Calumpang Cerca in Indang, Cavite. Consent from their parents were solicited and ethical considerations were applied in the research process. Both researchers and mothers or caregivers evaluated the social and behavioral changes in the performance of the subjects for inter rater comparative analysis using the modified Toddler Behavior Assessment Questionnaire and Social Skills Checklist to describe the behavior and social skills of the subjects before and after subjecting them to Creative Arts Therapy while the cognitive aspect was examined only by the researchers using the standardized MMDST screening tool. These modified instruments passed the content validity examination of three experts in the field of Nursing. The Creative Arts Therapy consisted of Arts, Music, Dance and Play therapies were administered on four succeeding weeks to toddlers and their performances were rated using the scale of 0=not done, 1 = failed, and 2= passed. Pre and post screening of toddler’s developmental status were performed using the Metro Manila Development Screening Test (MMDST), a standardized screening test to note for normalcy of the child’s development and to determine any delays in children 6 ½ years old and below. Results showed that out of sixty toddlers, majority obtained a passing score on the Creative Arts therapy, specifically the highest on Play, Dance, Arts, and Music therapy, respectively. Further, pre and post screening revealed that there is increase in the developmental status in aspects of cognitive, behavior and social aspects. After the therapy, most of the participants showed improvement in their cognitive level while majority of the 1 to 2 years old, increased in their behavioral aspect as well as for those whose age are at 3 years old. Furthermore, while majority of 1 year old toddlers showed improvement in their social skills, all of toddlers whose age are 2 and 3 years old improved in their social skills.

**AUTHOR(S):** Pornpun

**UNIVERSITY:** Suranaree University of Technology, National Taiwan University

**TITLE:** Risk assessment in feed mill workers

**ABSTRACT:** The aim of this study to assess health risk in feed mill workers. The study was divided into three parts. The first part was walk-through survey for hazard identification and take categorization in the work place. The second part was environmental measurement for exposure assessment and health examination; and collecting general information of study subject using interview questionnaires (ILO) for health effect rating. The third part was qualitative risk assessment and prioritization by U.S.EPA model using results environmental measurement and health examination. It was found that health hazard from different processes were similar type of hazard but vary in their magnitude. The highest health effect rating and exposure rating for dust exposure were in intake process with Level 2 (Chest tightness, shortness of breath, cough  $\geq 3$  month) for health effect rating and Level 2 (continuous Dust Exposure  $< 5$  mg/m<sup>3</sup>/work-h) for exposure rating; for noise exposure were in intake process with Level 1 (Hearing Level 27 – 40 dB(A)) for health effect rating and Level 1 (Noise Exposure 85-90 dB(A)/work-h) for exposure rating; for heat exposure were in expedition, premix, packaging and in take process with Level 1 (Fatigue, Rash, Headache and Squeamish Symptoms) for health effect rating and Level 3 (WBGT 29 – 32 °C/work-h) for exposure rating. The qualitative risk for dust exposure was in moderate risk category in intake process but low risk in molas, premix, packaging, and trivial risk in silo operator, expedition and maintenance process; for noise exposure was trivial risk in every processes except low risk in intake process; for heat exposure was moderate risk in intake packaging premix and molas process except low risk in silo operator and maintenance process

**AUTHOR(S):** Dewa Ayu Putu Ratna Juwita

**UNIVERSITY:** Warmadewa University, Department of Public Health

**TITLE:** The incidence and risk factors of osteoporosis in the population above 50 years old in Tulikup Village, Gianyar, Bali, Indonesia

**ABSTRACT:** This cross-sectional study with 221 randomized samples was carried out at Tulikup Village, Gianyar Regency, Bali and aimed to know the incidence of osteoporosis and its relationship with sex, age, calcium deficiency, phosphor deficiency, smoking, alcohol consumption, and obesity among the elderly above 50 years. Osteoporosis was detected based on Z score examined by Achilles bone densitometer. Risk factors were analysed by using cox-regression. Of 221 samples, the incidence of osteoporosis in elderly was 28.1%, in which 14.48% was in women and 13.57% in men. The incidence of calcium deficiency was 92.3%, and phosphor deficiency was 53.85%. The Hazard ratio of sex was 0.9 (CI 95%: 0,5-1,6), age among 60-74 yo was 4.5 (1.4-14.9), above 75 years old was 6,2 (CI 95%: 1,8-20.9), obesity 0.3 (CI 95%: 0,1-0.9), calcium deficiency 3.8 (CI 95%: 0.5-27.9), phosphor deficiency 1.1 (CI 95%: 0.7-1.9), smoking 1,4 (CI 95%: 0,7-3,1), alcohol consumption 0,8 (CI 95%: 0,2-2,9), severe physical activity 0.5 (CI 95%:0.2-0.9), medium physical activity 0.7 (0.3-1.4) and mild physical activity 0.7 (CI 95%:0.3-1.4). In conclusion, there was significant correlation between age, obesity, calcium deficiency and physical activity level. The age above 75 years old and calcium deficiency increased the risk six times, while obesity lowered the risk of osteoporosis significantly. The incidence of osteoporosis and osteopenia in female was higher than that in male, but it had no significant correlation. Phosphor deficiency, smoking, and alcohol consumption increased the risk of osteoporosis but had no significant correlation.

**AUTHOR(S):** Atsuko Sawanobori

**UNIVERSITY:** Osaka University Graduate School of Medicine, Department of Molecular Biochemistry & Clinical Investigation

**TITLE:** Novel diagnostic biomarker, serum Mac-2 binding protein, for the prediction of nonalcoholic steatohepatitis

**ABSTRACT: Background:** Nonalcoholic fatty liver disease (NAFLD) is a chronic liver disease growing as a serious medical problem around the world. Though most NAFLD presents as a nonalcoholic fatty liver (NAFL) often caused from obesity, some can be classified as nonalcoholic steatohepatitis (NASH) progressing to hepatic cirrhosis and hepatocellular carcinoma. To distinguish NASH from NAFL and to estimate NAFLD disease severity would be of great clinical significance. Here we present that one of the major fucosylated glycoproteins, Mac-2 binding protein (Mac-2bp), can work as a novel biomarker. While invasive liver biopsy remains as a gold standard for NAFLD/NASH diagnosis, analyzing the levels of Mac-2bp in the patient serum is much easier and efficient way. **Methods:** Using a liver bile duct cancer cell line, HuccT-1, we identified the major secretary fucosylated glycoprotein as Mac-2bp. Then, we analyzed serum Mac-2bp levels using our developed enzyme-linked immunosorbent assay (ELISA) in our cohort of 127 biopsy-proven NAFLD patients. Finally, we compared the efficacy of serum Mac-2bp levels with the M30 antigen which has been proposed as a serum diagnostic marker of NASH. **Results:** In our research, serum Mac-2bp levels significantly increased in NASH patients. In addition, the specificity of Mac-2bp was much higher than M30 antigen. **Conclusions:** Serum Mac-2bp levels can distinguish NASH from NAFL patients, and predict liver disease severity. Also, Mac-2bp can be more effective biomarker than M30 antigen. Our result supports the potential usefulness of measuring Mac-2bp levels in clinical practice.

**AUTHOR(S):** R Sutiawan

**UNIVERSITY:** Universitas Indonesia, Faculty of Public Health

**TITLE:** Determinant of fertility and its distribution in areas with variations of Total Fertility Rate and Contraceptive Prevalence Rate

**ABSTRACT:** The total fertility rate (TFR) in Indonesia is 2.6 and it is likely stagnant a long last ten years (2002-2012). Since the late 1990s, government decentralization and uneven local Family Planning (FP) commitment have resulted in a stagnant Contraceptive Prevalent rate (CPR) about 57,9% for modern methods and the unmet need is still high at 11,4%. It caused that the goal of Family Planning (FP) to improvement the quality life of Indonesian human is not reached. The stalling of fertility is impact from the fertility changes that happens in Indonesia. The study is to describe the fertility changes based on areas with fertility level and FP load indicator. The analysis used IDHS 2012 data with cross-sectional research design and a sample of 23239 ever-married women. The predictors are (1) reproductive health service (source of FP services, media of FP information, FP support); (2) socio-economic characteristics (education of woman and spouse, working status of woman and spouse, family households, woman living), and (3) woman reproductive behaviour (first age of married, first age of bearing, family size preferences, interval of fertility, child mortality, currently in union). All of the predictors are significant, except the working status of spouse. Private contraceptive services had an odds ratio (OR) of 2.9 in the area with low fertility level and burden of FP control more than government contraceptive services, meanwhile Media exposure OR 1.3, and odds 1.9 in urban area. Socio-economic status is highest effect determinant with OR 7 in the area with low fertility level and burden of FP control. Partnerships among National Family Planning Coordinating Board (BKKBN) and Ministry of Health can solve the stalling of fertility through improvement for participation of FP facility networking in National Health Assurance schema and also health promotions and counseling, especially to area with high fertility level and burden of FP control.

**AUTHOR(S):** Shino Takezawa

**UNIVERSITY:** University of Tsukuba, Graduate School of Comprehensive Human Science

**TITLE:** Bacterial vaginosis and medicinal practice among pregnant women in Bangladesh

**ABSTRACT: Background:** In developing countries, low birth weight (LBW) is one of the significant public health problems, and bacterial vaginosis (BV) is one of the causes of LBW. Though it is known that maintaining normal microbiota is effective in preventing various infections, irrational use of antibiotics disturbs the function of microbiota. In previous studies, the associations between knowledge and attitudes toward antibiotics have already been reported, and the relationships between BV and LBW have also been studied. However, it has yet to be shown whether the medicinal practice among pregnant women has an association with BV. **Methods:** This study is a cross-sectional study using the information of the screening test at the enrolment of a double-blind randomised intervention study on prebiotic agent fructooligosaccharide (FOS) in preventing LBW. All pregnant women in Nandipara, a peri-urban community of Dhaka, of less than 12 gestational weeks are asked to participate in this study. This study examines the relationship between the use of medication and BV with a Nugent score more than 7.0, indicating they have had BV. **Results:** The participants had little knowledge about medicine, and they just followed the instructions given to them. They seldom suffered from illness and used little medicine, even though people can get high quality medicine at a reasonable price in Bangladesh. Certain medicinal practices were related with BV. **Conclusion:** These findings indicate that public education and the enforcement of regulations regarding the prescription of medicine during pregnancy might be important.

**AUTHOR(S):** Emiko Tanaka, Taeko Watanabe, Etsuko Tomisaki, Kumi Watanabe, Tokie Anme

**UNIVERSITY:** University of Tsukuba, Faculty of Medicine

**TITLE:** Social relationships and later social competence in school-aged children: A three-year longitudinal study

**ABSTRACT: Objective:** The purpose of this study was to examine the influence of social relationships on later social competence in school-aged children. **Method:** The current study was designed as longitudinal study in which 90 caregivers with children aged 7 to 9 years old were recruited in 2011. Caregivers completed the Index of Social Interaction (ISI), which was used to assess social relationships. Social competence was measured in 2014, using the Strength and Difficulty Questionnaire (SDQ). The correlations between the ISI and SDQ scores were examined with the Spearman's correlation analysis. The current study was authorized by the ethics committee of the University of Tsukuba. The data used in the current study included no identifiable information about the participants. **Result:** A total of 78 caregivers with school aged children (boys 33, 41.0%; girls 46, 59.0%) took part in the current study. The total scores on the ISI was significantly related to "prosocial behavior" ( $r = -0.27, P = 0.02$ ) and "hyperactivity/inattention" ( $r = -0.36, P < 0.01$ ). However, no other subscales of the SDQ were correlated with the ISI score. **Conclusion:** The current study examined the influence of social relationships on children's social competence 3 years later. The findings indicate that frequency of interaction with others or having an active social role predicts later social competence in school-aged children. These findings can be utilized in schools and community health care systems for promoting children's social development.

**AUTHOR(S):** Richard Taylor

**UNIVERSITY:** University of New South Wales, School of Public Health and Community Medicine

**TITLE:** Trends in neonatal and infant mortality for Pacific Island States

**AUTHOR(S):** Gabriel M Vargas Duarte, Ángel Carlos Román Ramos and Jaime Javier Cantú Pompa

**UNIVERSITY:** School of Medicine of Tecnológico de Monterrey

**TITLE:** Implementation of clinical simulation has a learning technique to pediatrics residents at “Sistema Multicéntrico de Residencias”

**ABSTRACT:** Clinical simulation in teaching and evaluation of learning of medicine have taken relevance during the last years. This work aims to document the experience obtained in the process and implementation and show the results of a satisfaction survey applied to residents exposed to this methodology. The pediatrics department of the “sistema multicéntrico” of medical residencies decided to implement simulation has a formal teaching methodology since March of 2014. This implementation was a complex process because of the requirement of trained staff in the functioning of the equipment of high and low fidelity. Another difficulty was the necessity of prepared teachers in teaching based in competencies to achieve clinical scenarios to develop the required competencies in pediatrics residents. The survey results applied to the pediatrics residents show that clinical simulation is considered an experience useful and enjoyable. Even with the difficulties associated with this learning methodology it has been considered helpful. During the next two years, all of our pediatrics residents will be included in clinical simulation during their learning activities.

**AUTHOR(S):** Paolo Miguel M. Vicerra

**UNIVERSITY:** City University of Marikina

**TITLE:** HIV/AIDS knowledge of urban college students: Strengthening health education/promotion

**ABSTRACT:** According to the recent Department of Health’s HIV/AIDS Registry, the proportion of cases in the Philippines has been shifting from the past decade from older age groups to the younger. With the proportion of young people living with HIV aged 15 to 24 years standing at 28 per cent, more programmes are needed to address the issue. The present study deals with the establishment of knowledge level on the aforementioned matter for Marikina City, a locality in the National Capital Region recognised by a national council as being among the most competitive in social and economic programmes in the country. Convenience sampling on students aged at least 18 years at the local university in the city. Included in the survey are knowledge of how HIV is transmitted, who to talk with on the subject, and where testing is performed among others. Discussions with a number of students are also done to qualify points raised on the survey. It is observed on the data that a majority has insufficient knowledge of HIV/AIDS; this being on the nature of the disease itself and how it is transmitted. All respondents have heard of HIV/AIDS through tri-media and social media but remains to be discussed openly for some of the respondents. To those who do talk of the issue, it is done mostly with same-sexed friends. As the baseline is grounded on the students, the data are analysed then includes prospects for further research on strengthening education/promotion initiatives at university level.

**AUTHOR(S):** Mami Wakabayashi

**UNIVERSITY:** Osaka University

**TITLE:** Alcohol consumption patterns and burden of non-communicable disease / injury in Thai Cohort Study

**ABSTRACT: Introduction:** Injury is a major public health concern and alcohol consumption is one of important risk factors for injury. This study focuses on population-based injury trends in Thailand where over a period of rapid social. **Design and Methods:** A longitudinal survey was conducted of 42,785 Thai adult Open University students (aged 15 to 87 years) were followed up from 2005 to 2013. Non-fatal traffic crashes and non-traffic injury were the outcome measures. Alcohol consumption patterns identified were; non- drinkers, occasional light drinkers, occasional heavy drinkers, regular drinkers, and ex-drinkers. Multiple logistic regressions were used to examine the association between injuries and alcohol consumption, adjusted for socio-demographic factors, psychological stress, and risk-taking behaviours (e.g. drink-driving, and non-use of seat belts). **Results:** We identified a declining incidence of non-fatal injury: traffic injury was 9% in 2005 and 8% in 2013, and non-traffic injury was 27% in 2005 and 16% in 2013. Alcohol consumption was significantly associated with non-traffic injury in 2005, but the association disappeared in 2013. Non-traffic injury was associated with occasional heavy drinkers (AOR 1.27 95%CI 1.15-1.40) in 2005, but not in 2013 (AOR 1.05 95%CI 0.92-1.19). Traffic injury was not associated with heavy drinkers when adjusted health behavior and risk-taking behaviours in both survey year. **Conclusion:** We have examined non-fatal injury in the context of a health transition in Thailand. We discuss rapid changes in social and health behaviours and their relationship with traffic crash and non-traffic injury.

**AUTHOR(S):** Ayano Watanabe<sup>\*</sup>, Chika Honda<sup>§</sup>, Mikio Watanabe<sup>\*§</sup>, Shiro Yorifuji<sup>§</sup>, Hiroyasu Iso<sup>†§</sup>, Yoshinori Iwatani<sup>\*</sup>, Osaka Twin Research Group (Yoshinori Iwatani, Shiro Yorifuji, Kei Kamide, Shinji Kihara, Norio Sakai, Kiyoko Makimoto, Hiroko Watanabe, Jun Hatazawa, Mikio Watanabe and Chika Honda)

**UNIVERSITY:** <sup>\*</sup> Division of Health Sciences, Osaka University Graduate School of Medicine; <sup>§</sup> Center for Twin Research, Osaka University Graduate School of Medicine; <sup>†</sup> Department of Public Health, Osaka University Graduate School of Medicine

**TITLE:** Twin Research as a New Approach for Combating Non-Communicable Diseases

**ABSTRACT:** Human diseases are complex and multiple genetic and non-genetic factors play roles in disease development. However, it can be very difficult to distinguish whether the disease association is due to genetic or environmental factors when human subjects with varying genetic backgrounds are studied as in conventional epidemiological research. Twin research is a natural study design for relative contribution of nature (heredity) versus nurture (environment). Monozygotic twins share 100% of genetic background, while dizygotic twins share 50% on average. Therefore, twin studies can provide more precise evidence on disease associations as the genetic factors are controlled for. Also, with recent advancement in genetic analyses, twin research plays a significant role in epigenetic studies. Using discordant monozygotic twins, we can compare methylation of genes more precisely than using non-twins whose genetic backgrounds differ. Center for Twin Research at Osaka University Graduate School Medicine was established in 2009 as the very first institution in Japan that specialized in twin research. Since then, we have studied more than 300 twin participants and collected epidemiological, clinical and physiological data along with bio-resources. In addition to general blood panel tests such as CBC and basic metabolic panel, questionnaire-based data on nutrition, psychological status, and cognitive function was collected. Mean age was 51.2, ranging from 20 to 88 (n=594). Seventy percent of participants were female and 13.1% were dizygotic.

**AUTHOR(S):** Caroline Endah Wuryaningsih

**UNIVERSITY:** Universitas Indonesia, Faculty of Public Health

**TITLE:** Seeking treatment of diarrhea in child under two (Qualitative Case Studies)

**ABSTRACT:** Many cases of diarrhea occurred among children under two in Salena Kaili tribe, living Buluri village, Tipu subdistrict, West Palu, Central Sulawesi. This rate has a major influence in determining the health of grandmothers and their granddaughters. The case study is a qualitative study using an in-depth interview technique. The results showed that infants over 1 month who were sick with dysentery often had pain and bleeding. Treatment seeking usually decided by the grandmothers usually included traditional herbs: herb leaves (kalale, wando, guava: @ 3 pieces) and turmeric. All materials were mixed with 1 cup boiled water to drink 3 times a day. Moreover, infants were given jampe-jampe by the shaman (Mi), the abdomens were smeared the white water and they were told not to eat chili and tomatoes. Children also been taken to doctors and clinics when they still hadn't healed. Infants would not be taken to the hospital because it was not permitted by the grandmother. During the interviews, children who had dysentery were treated with a mixture of ampicillin and Supertetra purchased in the shop. This drug usually made the dysentery stop after 2 days dysentery. If not, the infant was given another dose.

**AUTHOR(S):** Yu-Chen Yau

**UNIVERSITY:** National Taiwan University

**TITLE:** Source apportionment of air pollutants by receptor model with multiple time resolution data in Taipei

**ABSTRACT:** Exposure to air pollutants such as volatile organic compounds (VOCs) and fine particulate matter (PM<sub>2.5</sub>) could trigger both acute and chronic adverse health effects. It is necessary to develop effective control strategies on the basis of source identification. One approach is conducting source apportionment by receptor models, which has been widely used for examining patterns of correlation in environmental data. This study is aimed to analyze the VOCs data obtained from a Photochemical Assessment Monitoring Station (PAMS) in Taipei and particular PM<sub>2.5</sub> data analyzed by X-Ray Fluorescence spectrometry (XRF) and Ion Chromatography (IC) analysis. The receptor model of Multilinear Engine version 2 (ME-2) is used to model the multiple time resolution data of hourly VOCs and 24 hours PM<sub>2.5</sub> measurements. The preliminary result showed that the concentration of the XRF elements in weekdays were mostly higher than those in weekends, especially for Fe, Zn, Mn and Pb. Through the VOC source profiles from the output of receptor model, we identified five factors: vehicle emission 1, natural gas leakage, evaporative gasoline, vehicle emission 2 and industry processing source. The preliminary modeling results showed that vehicle emission is the largest contributor in our study area, followed by evaporative gasoline, industry processing source and natural gas leakage.

**AUTHOR(S):** Tsung-Hsien Yu

**UNIVERSITY:** National Taiwan University, Institute of Health Policy and Management

**TITLE:** Do patterns of care quality indicate a relation between CABG patient's race and in-hospital mortality?

**ABSTRACT: Background:** Equity is an important issue in the healthcare research field. The purposes of this study were to determine whether aboriginal Taiwanese CABG patients receive healthcare services with poorer quality, and if such differences in treatment result in different outcomes. **Methods:** A retrospective multilevel study design was conducted using claims data from Taiwan's universal health insurance scheme for 2008-2012. Patients who underwent their CABG surgery between 2009 and 2011 were included in this study. CABG patients who were under 20 years of age or had unknown gender were

excluded. Hospital and surgeon's performance indicators in the previous one year were used to evaluate the level of quality via k-means clustering algorithm. Baron and Kenny's procedures for mediation effect were conducted to explore the relationship among patient's race, quality of CABG care, and inpatient mortality. **Results:** A total of 10,320 patients were included in the study. The results showed that 5.65% of the aboriginal patients received excellent quality of care, which was lower than that of patients not in the aboriginal group (11.48%). The mortality rate of aboriginal patients (12.10%) was also higher than patients not in the aboriginal group (5.25%). Finally, after the procedure of mediation effect testing, the results showed that the relationship between patient's race and CABG mortality was partially mediated by patterns of quality of care. **Conclusions:** Worse outcome in aboriginal CABG patients might be associated with poorer quality of received services. Health authorities should pay attention to this issue, and propose appropriate solutions.

**AUTHOR(S):** Helda

**UNIVERSITY:** University of Indonesia, Department of Epidemiology

**TITLE:** The Relationship Between Exclusive Breastfeeding and Disorder Development of Infants in Musi Banyuasin Regency in 2015

**ABSTRACT:** Children functional development in first-year is very important due to the period determined the quality of life of the infants. The World Health Organization (WHO) stated that more than 200 million children in developing countries had a problem with a functional developmental disorder. Exclusive breastfeeding is one of the factors associated with reduced functional developmental disorders. In Musi Banyuasin regency, the prevalence of functional development disorder 9.7% in 2012. In the other hand, the proportion of mother with exclusive breastfeeding was 56,3% in 2014. This study purpose is to analyze the relationship between the history of exclusive breastfeeding and functional development disorder among infants. This study used cross-sectional design involved 320 sample (infants) at 19 Puskesmas in Musi Banyuasin Regency. The results showed that the relationship between exclusive breastfeeding and functional development disorder among infant was PR: 2,099(95% CI:0,722-5,230).

**AUTHOR(S):** Besral

**UNIVERSITY:** University of Indonesia, Department of Biostatistics and Population Studies

**TITLE:** Model Integration of Health Information System in Indonesia: Case Study on AIDS, TB, and Malaria

**ABSTRACT:** This research was conducted based on the idea of fragmented Health Information Systems in Indonesia, which leads to inefficiency and poor quality of health data. This research aims to develop Model Integration of Health Information System, a Case Study on Programs of AIDS, TBC, and Malaria in the platform of Health Management Information System (HIMS) Generic version. These operational research activities are divided into two stages, the first stage is a review of the existing information systems using PRISM Framework Model approach and the second stage is to design the model integration of information systems on HIV/AIDS, TBC, and Malaria program. In the short-term integration plan, need to develop data warehouse or web services at the district level, to share data with other stakeholders in the Districts level and Provincials Health Office level and also with Ministry of Health in the central level. In the medium-term, it is recommended to finalize the Generic version of HMIS application program and getting stable application, then gradually insert information systems of HIV/AIDS, TBC, and Malaria into the HMIS Generic version. In the long term, all health system information such as Immunization, Nutrition, Maternal and Child Health will be inserted into the HMIS

Generic version, finally all Health Information Systems program in the Ministry of Health will fully integrated.

**AUTHOR(S):** Lily RMZ<sup>1,2</sup>, Noran N Hairi<sup>1,2</sup>, GH Tee<sup>3</sup>, Tahir Aris<sup>3</sup>

**UNIVERSITY:** <sup>1</sup> Julius Centre University of Malaya, Centre for Clinical Epidemiology and Evidence-Based Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia; <sup>2</sup> Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia; <sup>3</sup> Institute for Public Health, National Institutes of Health, Ministry of Health, Kuala Lumpur, Malaysia

**TITLE:** Obesity and chronic pain among older people in Malaysia: evidence from the National Health Morbidity Survey III

**ABSTRACT: Introduction:** Overweight and obesity are issues of increasing prevalence among older people. Understanding gender differences allow us to decide whether evaluation of chronic pain should be part of the routine examination in obese older people, especially when women represents more than half of older people's population. **Objective:** The purpose of our study was to establish if there was any gender difference in the association between obesity and chronic pain among older people. **Methods:** We analysed a sub-population sample of 4954 older people aged 60 years and above, from Malaysia's Third National Health and Morbidity Survey (NMHS III). Chronic Pain and pain with interference were measured by self-report. Respondents body weight, height and waist circumference were measured by trained nurses and paramedics. **Results:** The overall prevalence of chronic pain among our older people was 15.6%; higher in women than in men (18.4% vs 12.4%). Among older people with chronic pain, 88.3% experienced pain with interference. Chronic pain was more frequently reported among overweight and obese respondents in this population. After adjusting for important confounders, abdominal obesity was significantly associated with chronic pain among older female with adjusted prevalence ratio (PR) 1.23 (95% CI: 1.03, 1.47) but not among older male (aPR 1.16, 95% CI: 0.93, 1.45). **Conclusion:** Our data suggested that chronic pain was commonly reported among overweight and obese older people. There was gender difference in the association between overweight and obesity with chronic pain, where the association was significant among older women.

**AUTHOR(S):** Tzu-Hsuen Yuan

**UNIVERSITY:** National Taiwan University, School of Public Health

**TITLE:** Early biomarkers of non-communicable diseases for residents in the vicinity of a petrochemical complex

**ABSTRACT:** This study is to conduct a cross-sectional study to investigate the early biomarkers of non-communicable diseases of resident living in the vicinity of a petrochemical complex in central Taiwan. We recruited 3230 study subjects with questionnaire survey and health examination from ten townships, including 1016 in Zone A with 0-10 km from the complex, 1007 in Zone B with 10-20 km from the complex, and 1207 in Zone C with 20-40 km from the complex, in 2009-2012. The basic characteristics of the established epidemiologic cohort are: age (46.4±21.8), gender (male 41.5%), smoker (9.9%), alcohol drinker (10.1%) and betel quid chewer (4.7%). The main findings of lung function are (1) FEF25-75% percent predicted and FEV1/FVC for subjects in Zone A were lower than those in Zone C. (2) FVC percent predicted and FEV1 percent predicted for subjects who are non-smokers and have no history of disease in Zone A were lower than those in Zone B. (3) Subjects in Zone A had lower PEF percent predicted than those in other two Zones. The main findings of health examinations are that the abnormal rates of BMI, platelet, BUN, GOT (AST), GPT (ALT), hepatitis C, cholesterol, and LDL-C for subjects in

Zone A were significantly higher than those in Zone B and Zone C. In conclusion, lung, liver, renal function, and blood and cardiovascular system were all affected for residents who lived within 10 km radius from a petrochemical complex.