

International Health Conference 2016  
20<sup>th</sup> – 22<sup>nd</sup> June, Kings College London

Book of Abstracts

# Oral Presentations

## Sessions starting Tuesday 9:00

### Health Policy and Systems:

**007 Capabilities, Human Development and other Societal Determinants of Clustered Health-System Attainment Groups**

Michaela Otis<sup>1</sup>, Adrian Renton<sup>1</sup>, Gopalakrishnan Netuveli<sup>1</sup>, <sup>1</sup>*Institute for Health and Human Development, London, UK*

Achieving the Sustainable Development Goals (UN, 2015) requires evidence for the societal determinants of health-systems, to encourage health in all policies. The world health report (WHO, 2000), which ranked performance in the millennium development goals (UNDP, 2000), has not been analysed against determinants. Cluster analysis divided 191 member states into four distinct health-system performance groups, which were differentiated against societal factors. Bivariate analysis showed significant differences in education, GDP and gender development (UNDP, 2000), freedom (Freedom House, 2000), infrastructure (World Bank, 2000) and resource use (WWF, 2000). Conclusions discuss the mechanisms between health and freedoms, supporting Sen's Capability Approach (1999).

**037 Power and influence in nutrition policymaking in Australia**

Katherine Cullerton<sup>1</sup>, Danielle Gallegos<sup>1</sup>, Amanda Lee<sup>1</sup>, Timothy Donnet<sup>1</sup>, <sup>1</sup>*Queensland University of Technology, Brisbane, Queensland, Australia*

In Australia, policy action to address poor dietary intake is limited, despite nutrition having a significant impact on health. To understand how nutrition policy is influenced, and by whom, the world's first network analysis of a national nutrition policy system was undertaken. Influential stakeholders and pathways of influence in Australian nutrition policy were identified, allowing an examination of power and influence in policymaking. Another key finding was the lack of interaction between nutrition professionals and policy decision-makers. This research highlights opportunities for nutrition professionals to better influence policymaking and thereby improve health services

**175 Strategies to improve the timeliness and relevance of research for policy and decision making for health and health services.**

Rhona Mijumbi-Deve<sup>1</sup>, Nelson Sewankambo<sup>1</sup>, <sup>1</sup>*Makerere University, Kampala, Uganda*

Rapid response mechanisms are strategies that have arisen out of a need to improve the well-documented barriers to the use of research for policy and decision-making for health and health services. Such barriers include timeliness and relevance of research. These rapid response mechanisms that are active in countries like Canada, Brazil and Uganda, have also been found to increase interaction between users and producers of research. This presentation summarizes a model of these mechanisms that are a form of user-pull effort and are a strategy between the full-serve evidence briefs and dialogues and the self-serve clearing houses or virtual libraries.

021

### Policy and Academic Perspectives on Innovation in English Health Care - A Systematic Literature Review

Professor Ewan Ferlie<sup>1</sup>, Dr Jean Ledger<sup>1</sup>, Dr Daniela d'Andreta<sup>2</sup>, Professor Davide Nicolini<sup>2</sup>, Mr John de Pury<sup>3</sup>, <sup>1</sup>*King's College London, UK*, <sup>2</sup>*Warwick Business School Coventry, UK*, <sup>3</sup>*Universities UK, London*

This paper comes from our current study on Academic Health Sciences Networks (AHSNs). AHSNs reflect a recurrent policy level attempt to develop an institutional architecture to facilitate innovation diffusion. We undertook a systematic literature review of various streams of academic and policy literature and reviewed policy papers on the UK health care and life sciences sectors.

We (briefly) describe the literature search strategy and review the content of various literature streams. We suggest that literature around the Triple Helix of knowledge production and regional innovation systems are important additions to the more micro level Health Services Research literature.

## Public Health

204

### A systematic review of randomized controlled trials on the evidence of long-term effectiveness of work-based lifestyle interventions to tackle overweight and obesity. Greta Tam, <sup>1</sup>*Chinese University, Hong Kong, Hong Kong*

**Background :** Obesity is one of the 5 leading global risks for mortality. Workplace health promotion programs have the potential to deliver multicomponent population-level interventions. However, there is no summary of recent evidence on long-term effectiveness of multicomponent lifestyle interventions in the workplace targeting obesity.

**Methods:** 9 studies were identified by literature search in multiple databases 2005 to September 2015.

**Results:** 4 studies reported positive findings. Many studies included environmental interventions, but only 1 of these studies showed significant results

**Conclusion:** Studies which showed significant reduction in BMI were of high intensity or included a specific motivational component.

265

### A Qualitative Study Investigating the Issues Surrounding the Health of Asylum Seekers and Refugees in Glasgow

Shona Mackinnon<sup>1</sup>, <sup>1</sup>*University of Glasgow, Glasgow, UK*

**Background.** The majority of asylum seekers and refugees in Scotland live in Glasgow. The aim of this research was gain understanding of the health-related issues in this population and consider ways students can help.

**Methods.** A grounded theory approach was used. Unstructured and semi-structured interviews were conducted with asylum seekers and refugees, and with healthcare professionals and volunteers.

**Results.** Mental health was found to be the single biggest health issue. There were also significant issues with accessing health services.

**Conclusions.** The health needs of this group are complex. Volunteering schemes have been established to help address these issues.

### Measles immunity in Madagascar: a long honey moon is still possible

Keitly MENSAH<sup>1,2</sup>, Miora Bruna Ramamonjihariso<sup>1</sup>, Miora Andria<sup>1</sup>, Richter Razafindratsimandresy<sup>1</sup>, C. Jessica E. Metcalf<sup>3,4</sup>, Jean-Michel Heraud<sup>1</sup>,  
<sup>1</sup>*Virology Unit, Madagascar Pasteur Institute, Antananarivo, Madagascar,* <sup>2</sup>*Service d'Hygiène, Epidémiologie et Prévention, Hôpital Edouard Herriot, Hospices Civils de Lyon, Lyon, France,* <sup>3</sup>*Department of Ecology and Evolutionary Biology, Princeton University, Princeton, USA,* <sup>4</sup>. *Office of Population Research, Woodrow Wilson School, Princeton University, Princeton, USA*

Madagascar's vaccination plan includes measles containing vaccine since 1985 with intensification since 2007. Other countries with a single-dose schema have experienced measles outbreak recently. Our study aimed to explore measles immunity from surveillance system data to evaluate population protection and outbreak risk areas. 66.86% of population is immune; less than 2% of target population is fully immune. Regional risk areas were identified. 57% of measles suspect cases were diagnosed as rubella cases. Adaptation to vaccine target age and health care workers training are needed to make this honey moon stay longer.

### Culturally tailored nutrition advice influences coronary heart disease risk factors in a Bangladeshi community. A Pilot Study.

Trevor George<sup>1</sup>, Nishat Tasnim<sup>2</sup>, Julie Young<sup>2</sup>  
<sup>1</sup>*King's College London, London, UK,* <sup>2</sup>*Northumbria University, Newcastle, UK*

*Theory:* UK-based Bangladeshis have higher CHD death rates, due to physical inactivity, diets high in fat, salt, sugar and low fruit, vegetables.

*Hypothesis:* Culturally tailored nutrition advice would reduce CHD risk in Bangladeshi-Muslim women (n=12, aged 33±7).

*Methods:* UK dietary guidelines adapted to Bangladeshi diets, tailored fact sheets, visual aids and references from the Quran. Nutritional knowledge, lifestyle and dietary intake were recorded before and 8 weeks after intervention (questionnaires, diet diaries).

*Results:* Fat and carbohydrate intake, arterial stiffness, waist, hip size decreased and nutritional knowledge increased.

*Conclusion:* Culturally tailored nutritional advice can reduce CHD risk factors in Bangladeshi women.

### A meta-analysis evaluation of Internet-based intervention on waist circumference reduction

Dong-Chul Seo<sup>1</sup>, Jingjing Niu<sup>2</sup>, Dahye Chung<sup>1</sup><sup>1</sup>*Ewha Womans University, Seoul, Republic of Korea,* <sup>2</sup>*Idaho State University, Pocatello, ID, USA*

This meta-analysis reviewed randomized controlled trials (N=31 trials and 8,442 participants) that used the Internet as a main intervention approach and analyzed the effect of Internet-based interventions on waist circumference (WC) change. Internet-based interventions showed a significant WC reduction (-2.99 cm, 95% CI = -3.68 to -2.30 cm, I<sup>2</sup> = 93.3%) and significantly better effects on WC loss (2.38 cm, 95% CI = 1.61 to 3.25 cm, I<sup>2</sup> = 97.2%) than minimal interventions such as information-only groups. Meta-regression results showed that baseline WC, gender, and the

presence of social support in the intervention were significantly associated with WC reduction.

**036 An observational study of a rural population in a Zambia, assessing the awareness of modifiable risk factors for hypertension in low income settings.**

Harriet Hubbard<sup>1</sup>, <sup>1</sup>*University of Southampton, Southampton, UK*

*Title:* Observational study of a rural population in Zambia, assessing awareness of modifiable risk factors for hypertension.

*Framework:* To ascertain understanding of modifiable risk factors for hypertension in a rural setting.

*Method:* Interviews, questionnaires and a focus group were used to collect data from fifteen participants on awareness of modifiable risk factors for hypertension.

*Hypotheses:* Awareness in rural, low-income settings is poor.

*Results:* The awareness of hypertension was good, with four major themes identified. A misunderstanding of the detrimental effects of salt consumption was found.

*Conclusion:* Public health interventions are necessary to educate isolated populations about non-communicable diseases.

**087 Autogenic Training (AT) ± sensory stimulation for chronic eye disease**

Edith Rom<sup>1</sup>, <sup>1</sup>*Gloucester Medical Eye Centre, Gloucester, UK*

AT is a standardized stress management technique, based on physiological principles. It is cost-effective and has shown clinically relevant results in treatment and prevention of chronic disease. The presentation will explore AT and its similarities with sensory stimulation.

Aims

- A.) Summarize current evidence for indications and mechanisms of AT as compared to sensory stimulation.
- B.) Suggest research into testable mechanisms

Data

Case reports from ophthalmology with literature review

Theory

Allostasis altered by AT and sensory stimulation may increase resilience and prevent chronic disease.

Conclusion

These non-pharmacological treatments may modify the course of chronic eye disease, prevent blindness, empower patients.

**179 Fruits of our labour: A health anthropology of a multipurpose technological system**

David Hallberg<sup>1</sup>, <sup>1</sup>*The Swedish Red Cross University College, Stockholm, Sweden*

This short communication reports from a one-year cross-cultural project about food security and nutrition in Venezuela, Kenya, and Sweden. The project, which lies within public health, was designed as a film assignment where a series of short documentaries were produced.

Drawing on theories in sociology and archaeology, it presents a community garden as a multipurpose technological system where activities among middle classer occur. In addition it reveals community gardening as recreation rather than for securing food supply.

## Care and Mental Health

### 278 **Quality and Access to Primary Care for Families Facing Substance Use Challenges**

Marion Schnute<sup>1</sup>, AnNet Family Member Groups, <sup>1</sup>*University of Hildesheim, Hildesheim, Germany*

Primary care is a first point of contact for individuals with substance use challenges and their families. Yet data suggests poorer access and quality of care received by families affected by substance use challenges relative to those without. AnNet is a German Ministry of Health funded participatory study. Interviews and focus groups with 30 family members and 21 care providers from various disciplines were conducted and family, care provider and systemic barriers to primary care identified. Further mental health education, integration of primary, mental health, social and substance use services and family participation are suggested to improve primary care disparities.

### 303 **Development of a measure of model fidelity for mental health Crisis Resolution Teams**

Brynmor Lloyd-Evans<sup>1</sup>, Gary Bond<sup>2</sup>, Torleif Ruud<sup>3</sup>, Ada Ivanecka<sup>4</sup>, Richard Gray<sup>4</sup>, David Osborn<sup>1</sup>, Fiona Nolan<sup>1</sup>, Claire Henderson<sup>5</sup>, Oliver Mason<sup>1</sup>, Nicky Goater<sup>6</sup>, Kathleen Kelly<sup>7</sup>, Gareth Ambler<sup>1</sup>, Steve Onyett<sup>8</sup>, Aisling Clifford<sup>9</sup>, Danielle Lamb<sup>1</sup>, Sarah Fahmy<sup>1</sup>, Ellie Brown<sup>4</sup>, Beth Paterson<sup>1</sup>, Angela Sweeney<sup>1</sup>, David Hindle<sup>1</sup>  
<sup>1</sup>*UCL, London, UK*, <sup>2</sup>*Geisel School of Medicine at Dartmouth, Lebanon, NH, USA*, <sup>3</sup>*Akershus University Hospital, Lørenskog, Norway*, <sup>4</sup>*University of the West of England, Bristol, UK*, <sup>5</sup>*King's College London, London, UK*, <sup>6</sup>*West London Mental Health NHS Trust, London, UK*, <sup>7</sup>*Oxfordshire Healthcare NHS Foundation Trust, Oxford, UK*, <sup>8</sup>*Onyett Entero Ltd, care of University of the West of England, Bristol, UK*, <sup>9</sup>*Camden and Islington NHS Foundation Trust, London, UK*

We aimed to develop a fidelity scale for Crisis Resolution Teams; test its feasibility and utility in practice settings; and explore its psychometric properties, as part of a research programme on Crisis Resolution Teams (CORE).

Construction of the scale used concept mapping. It was piloted at 75 CRTs. The estimated correlation between individual ratings was 0.65 (95 CI: 0.54 to 0.76). The estimated intra-class correlation (ICC) between ratings averaged over 16 raters was 0.97 (0.95 to 0.98). The average consistency of agreement ICC was 0.97.

The scale is feasible, acceptable and can distinguish higher and lower fidelity services overall.

### 251 **Exploring experience of communication in the care of children with palliative care needs: the perspectives of physicians, nurses and family carers in Jordan.**

Maha Atout<sup>1</sup>, Pippa Hemingway<sup>1</sup>, Jane Seymour<sup>1</sup>, <sup>1</sup>*University of Nottingham, Nottingham, UK*

**Introduction:** There has been little research into the experience of communication from the perspectives of physicians, family carers and nurses in the field of paediatric palliative care.

**Purpose:** To explore the experience of communication in the care of children with palliative care needs

**Methods:** A collective case study approach was conducted in three paediatric units in one Jordanian hospital.

**Findings:** The mutual protection dominated the communication between children, parents and health care providers who participated in the study.

**Conclusion:** Further studies are recommended to explore this issue from the perspective of children, taking children as the primary source of information

### 139 **Pre-pregnancy care for women with type 2 diabetes: The PREPARED study**

Rita Forde<sup>1</sup>, Evridiki Patelarou<sup>1</sup>, Jacqueline Collin<sup>1</sup>, Angus Forbes<sup>1</sup>, <sup>1</sup>*King's College London, London, UK*

Pre-pregnancy care (PPC) for women with type 2 diabetes (WT2DM) is associated with improved maternal and fetal outcomes, yet uptake is poor. Individual interviews were conducted with 30 WT2DM from diverse backgrounds and 22 healthcare professionals (HCPs) from primary and secondary care. Data were analysed using Framework Analysis.

WT2DM need to be supported to understand the benefits of PPC in a manner that is congruent with their personal needs and beliefs; HCPs need to incorporate PPC into the care of WT2DM with pregnancy potential. These data will be utilised to identify strategies to augment the uptake of PPC for WT2DM.

## Ageing

### 114 **For financial or active ageing reasons? Econometric evidence from SHARE on health of the older precarious workers**

Andrej Srakar<sup>1</sup>, <sup>1</sup>*Institute for Economic Research and Faculty of Economics, University of Ljubljana, Ljubljana, Slovenia*

In the article we present results of the analysis on the health of older precarious workers, based on Wave 5 of the SHARE survey, a topic, which so far received very little evidence. We present some basic descriptive statistics and bivariate analysis results, followed by econometric results using finite mixture models to model the heterogeneity among precarious workers. Our analysis points to a large heterogeneity among precarious workers which fall into two broad groups: "precarious workers for money reasons" and "for active ageing reasons", with clearly visible differences in income and health. We conclude by policy implications of the findings.

### 142 **Non-cancer end of life care: the Hong Kong experience**

Elsie Hui<sup>1,2</sup>, Jean Woo<sup>1,4</sup> *The Chinese University of Hong Kong, Shatin, Hong Kong,* <sup>2</sup> *Shatin Hospital, Shatin, Hong Kong*

13% (1 million) of the Hong Kong population is 65 or older, and 7% (70,000) are institutionalised. Deaths occurring outside of hospitals are reportable to the Coroner, and over 11,000 nursing home residents died in hospitals in 2015. Advanced dementia and end organ failure accounted for 3/4 of these deaths. These patients exhibit the 'revolving door phenomenon' with 2.5 hospitalisation episodes in the final 6 months. A novel end of life care model was introduced to smoothen nursing home residents' final journey and facilitate a 'good death' through promotion of Advance Care Planning and focussing on symptom control.

**250 Young people's perception of the elderly and its likely impact on health care delivery service**

Frank Eyetsemitan<sup>1</sup>, <sup>1</sup>*Roger Williams University, Bristol, RI, USA*

A study of young people (undergraduates) from developing and developed countries identified traits that they perceived in elderly persons to be "Unattractive."

They were then asked to rate their tendencies to *not* help: 1) their elderly parents, and 2) the elderly in general--based on those negative traits.

"Unattractive" traits could *not* prevent them from wanting to help their elderly parents, but it did prevent them from wanting to help the elderly in general.

It is imperative to note that a negative attitude of not wanting to help an elderly person might impact negatively on the quality of service delivery.

**252 Revisiting the Health and Wellness Benefits to Aging Individuals of Exercise, Physical Activity and Lifetime Sports Participation 25 Years Later.**

Irving Smith<sup>1</sup>, <sup>1</sup>*Coppin State University, Baltimore, Maryland, USA*

Fiatarone et al. (1990) published the first study of the health benefits of exercise and physical activity to aging individuals in 1990. Their applied research led to a universal change in the care and treatment of aging individuals. Initially met with skepticism, caution and downright disdain, in the 25 years since that initial research, exercise, physical activity and lifetime sports participation has become the panacea for a myriad of the maladies of aging and is now highly recommended by physicians and healthcare providers worldwide. Smith (1995) conducted a similar study that added a lifetime sports participation dimension to Fiatarone's study.

## Research Utilisation

**031 The Use of Study Registration and Protocols in Plastic Surgery Research: A systematic review**

Thomas Edward Pidgeon<sup>1,2</sup>, Christopher Limb<sup>1,3</sup>, Riaz Agha<sup>1,4</sup>, Katherine Whitehurst<sup>1,5</sup>, Charmilie Chandrakumar<sup>1,6</sup>, Georgina Wellstead<sup>1,6</sup>, Alexander Fowler<sup>1,4</sup>, Dennis Orgill<sup>1,7</sup>, <sup>1</sup>*The Academic Surgical Collaborative, National, UK,* <sup>2</sup>*St. Andrews Centre for Plastic Surgery and Burns, Essex, UK,* <sup>3</sup>*Royal Sussex County Hospital, Sussex, UK,* <sup>4</sup>*Guy's and St. Thomas' NHS Foundation Trust, London, UK,* <sup>5</sup>*University College London Medical School, London, UK,* <sup>6</sup>*Barts and the London*

*School of Medicine and Dentistry, London, UK, <sup>7</sup>Division of Plastic Surgery, Brigham and Women's Hospital, Boston, USA*

#### Background

This systematic review examined whether recent studies published in plastic surgery comply with Declaration of Helsinki guidance that all studies involving human subjects must have a protocol registered in a publicly accessible database.

#### Methods

Plastic surgery studies published from 1st April 2014 - 31st March 2015 were reviewed along with trial registry databases.

#### Results

24 of 595 studies had a protocol registered (4.0%). The study design that most commonly had a registered protocol was the RCT (8 of 24 RCTs).

#### Conclusions

Protocol registration for studies involving human participants in plastic surgery can be improved.

192

### **Perceived Barriers & Facilitators to Implementing Evidence-Based Practice: A Descriptive Cross Sectional Study Among Nurses in the Bahamas**

Oscar Ocho<sup>1</sup>, Daphne Duncombe<sup>1</sup>, <sup>1</sup>*University of the West Indies, St Augustine, Trinidad and Tobago*

**Background:** With the increasing emphasis on evidence-based practice (EBP) there are a number of factors which either obstruct or promote successful uptake.

**Method:** A stratified random sample was used to survey 100 nurses working in four different hospital settings.

**Results:** Most participants (72.1%) had never tried to implement EBP. Major barriers identified were inadequate resources (85.2%) and insufficient training (83.6%). Additional training (88.5%; n=54) and evidence-based organizational policies and protocols (86.9%; n=53) were the top facilitators.

**Discussion and Conclusions:** There is need for supporting the prioritization of EBP in health care, both at the institutional and governmental levels.

203

### **Limitations of measuring novel biomarkers in patients with non-communicable diseases in developing countries**

Chidum Ezenwaka<sup>1</sup>, Saleh Idris<sup>1</sup>, Gershwin Davis<sup>1</sup>, Lesley Roberts<sup>1</sup>, <sup>1</sup>*The University of the West Indies, St Augustine Campus, Trinidad, Trinidad and Tobago*

Chronic kidney disease (CKD) is one major complication from non-communicable diseases (NCD) in the Caribbean. We determined the usefulness of routine measurement of a new biomarker, neutrophil gelatinase-associated lipocalin (NGAL), in NCD patients in under-resourced population. Routine kidney function tests and NGAL were measured in 298 NCD-patients. CKD patients had the highest levels of NGAL than the other NCD patients and multiple linear regression modeling showed that NGAL was significantly related to other biochemical test in CKD patients and not in the other NCD-patients. NGAL measurement may not be

cost-effective as a routine kidney assessment of NCD-patients in under-resourced economies.

**084 Research Investments in Global Health: systematic analysis of infectious disease research investment in the United Kingdom, 1997-2013.**

Rebecca Brown<sup>1</sup>, Michael Head<sup>1</sup>, Joseph Fitchett<sup>2</sup>, Rifat Atun<sup>2</sup>, Stuart Clarke<sup>1</sup>,  
<sup>1</sup>*University of Southampton, Southampton, UK, <sup>2</sup>Harvard University, Boston, UK*

Research is essential to improve the evidence base for policy and clinical practice. The Research Investments in Global Health study (ResIn; [www.researchinvestments.org](http://www.researchinvestments.org)) has systematically analysed public and philanthropic investments awarded to the UK for infectious disease research (£3.7 billion) compared to global burden of disease. Analysis revealed that most infections have received increases in research investment, alongside temporal decreases in global burden of disease. Global health research, particularly some neglected tropical diseases, is well-funded. Sepsis and antimicrobial resistance have been poorly-funded relative to public health threat. Mapping of UK investments can inform global policymakers on resource allocation for research investment.

## Sessions starting Tuesday 10:50

### Health Economics

**176 Understanding Trends in Hospital Admissions and Beds Days, England, 1997/8 to /15**

Raphael Wittenberg<sup>1</sup>, Stuart Redding<sup>1</sup>, Catia Nicodemo<sup>1</sup>, Barry McCormick,  
<sup>1</sup>*University of Oxford, Oxford, UK*

The aim was to generate improved understanding of recent trends in hospital inpatient activity in England. We undertook analyses to explore how far recent trends can be explained by: age effects, the age distribution of the population; cohort effects, differing admission rates of people born in different years; period effects, relating to a specific year not explained by age or cohort effects. We found that cohort effects have offset much of the age effects and that the substantial rise in admissions has been driven by period effects. These may be more amenable to policy than age or cohort effects.

**040 Income, Health, and Suicide: Evidence from Micro Panel Data on One Million Koreans, 2002-2013**

Chulhee Lee<sup>1</sup>. <sup>1</sup>*Seoul National University, Seoul, Republic of Korea*

Little evidence has been suggested regarding the effects of individual income and health on suicide. We investigated how individual economic status and health conditions (chronic diseases and disabilities) affect the probability of suicidal death based on analyzing micro panel data constructed by the Korean National Health Insurance that followed up a sample of one million individuals from 2002 to 2013. The results show that low economic status significantly increases the probability of suicide. Poor health is strongly related to a higher risk of suicide. We also found that the effects of health on suicide considerably differ by income class.

## A Life Course Perspective on the Income-to-Health Relationship: Macro-Empirical Evidence from Two Centuries

Korbinian Nagel<sup>1</sup>, <sup>1</sup>*Helmut-Schmidt University, Hamburg, Germany*

The epidemiological literature discusses two contrary hypotheses that describe the income-to-health relationship from a life course perspective: the "cumulative advantage" and the "age as leveller" hypothesis. This study investigates both hypotheses at a macro level with long time horizon. It asks whether per capita income improves population health differently across population age groups. Observing 20 countries and for up to 211 years, a significant effect of income is only found for survivability of middle age groups. Thus, "cumulative advantage" describes the transition from young to middle ages whereas "age as leveller" the transition from middle to old ages.

## Health Policy and Systems

### 039 Health systems response to patient's needs: An argument for the importance of functioning information

Maren Hopfe<sup>1,2</sup>, Birgit Prodingner<sup>1,2</sup>, Jerome Bickenbach<sup>1,2</sup>, Alarcos Cieza<sup>3,4</sup>, Gerold Stucki<sup>1,2,4</sup>*Swiss Paraplegic Research, Nottwil, Switzerland, <sup>2</sup>Department of Health Sciences & Health Policy University of Lucerne, Lucerne, Switzerland, <sup>3</sup>University of Southampton, Faculty of Social and Human Sciences, School of Psychology, Southampton, UK, <sup>4</sup>Department of Medical Informatics, Biometry and Epidemiology – IBE, Chair for Public Health and Health Services Research, Research Unit for Biopsychosocial Health, Ludwig-Maximilians-University (LMU), Munich, Germany*

Health systems are challenged to meet the needs of the growing number of patients with chronic and multiple health conditions where the primary outcome of care is optimizing functioning over their life span rather than curing diseases. Functioning, as defined by the World Health Organization, captures the impact of a health condition on a person's body and life. The crucial importance of functioning information for a well performing health system is not yet sufficiently recognized. This paper argues that functioning information is fundamental in all components of health systems to optimize the system's response to patient's health and related needs.

### 070 A public-private partnership between a district referral hospital and an NGO-supported paediatric facility in rural Cambodia.

Helen Catton<sup>1</sup>, Tann Bunchhoeun<sup>2</sup>,<sup>1</sup>*Manchester University, Manchester, UK, <sup>2</sup>Angkor Hospital for Children, Siem Reap, Cambodia*

Rural populations in Cambodia have some of the region's worst child-health outcomes.

#### Framework

Globally public-private partnerships have been used to tackle challenges in health care provision.

#### Methods

In 2010 Angkor Hospital for Children opened a rural satellite clinic as a public-private partnership with the Sotnikum government hospital.

### Results

Results include quality paediatric care, ambulance transfer with 10% reduction in mortality between 2012-2014, improved ancillary service availability, 5-fold increase in hospital deliveries, introduction of immediate newborn resuscitation, reduction in neonatal hypothermia, medical resident rotation and transition to local leadership.

### Conclusion

We demonstrate multiple health service improvements using a public-private partnership model.

052

### **"For years you've been able to fax your weekly sugars to the obstetrician": how a partnership model is changing health service delivery systems for women with diabetes in pregnancy in remote Australia**

Renaë Kirkham<sup>1</sup>, Jacqueline Boyle<sup>1</sup>, Michelle Dowden<sup>1</sup>, Louise Maple-Brown<sup>1</sup>,  
<sup>1</sup>*Menzies School of Health Research, Northern Territory, Australia*

**Background:** Indigenous women in the Northern Territory (NT) have high rates of pre-existing type 2 diabetes in pregnancy and gestational diabetes. The Diabetes in Pregnancy (DIP) Partnership was established in 2012 to improve outcomes.

**Aims:** To explore current practices for DIP in the NT since 2012.

**Methods:** Focus groups with healthcare professionals using the Systems Assessment Tool were conducted and thematically analysed.

**Results:** Improvements to models of care (MOC) can be attributed to healthcare professionals operating at an advanced level, development of clinics and improved referral pathways.

**Discussion:** The partnership has developed innovative systems for the improvement of MOC.

## Human Resources and Workforce

217

### **Managers' decision-space in decentralized district health workforce management in Uganda**

Alvaro Alonso-Garbayo<sup>1</sup>, Sally Theobald<sup>1</sup>, Joanna Raven<sup>1</sup>, Freddie Ssengooba<sup>2</sup>, Timothy Martineau<sup>1</sup>, Milly Nattimba<sup>2</sup>,<sup>1</sup>*Liverpool School of Tropical Medicine, Liverpool, UK*, <sup>2</sup>*Makerere University, Kampala, Uganda*

This study explores the "decision-space" - or range of options - that district health managers have to manage their workforce in Uganda. This paper is part of an action-research study undertaken by the PERFORM Research Consortium in Uganda to explore options for strengthening workforce performance. It uses ethnographic and documentary methods to compare the authorised ("de jure") and actual ("de facto") decision-space to illustrate the impact that PERFORM intervention had on actual managers' decision-making. The study found that

supporting managers using action research resulted in their actual decision-space being broadened.

**235**                    **Increasing academic skills and developing of a research culture in a non-urban hospital**

Hanne Blæhr Jørsboe<sup>1</sup>, *<sup>1</sup>Nykøbing F Hospital, Nykøbing F, Denmark*

The last years, Danish hospitals have primarily focused on efficient patient flow, resulting in weaker professional environments and difficulties in recruitment of staff. To address this challenge, a three-step strategy describes how we will develop and revitalize the research culture. In parallel, basic staff learn evidence-based medicine through journal clubs, research-cafes, and research skills training. Experienced researchers are supported with finance, help to statistics and technical assistance. New research is facilitated by upgrading use of patient related quality data and presentation of results in research events. We have now staff working with research, several publications, and better recruitment possibilities.

**113**                    **How coaching managers of health care staff can impact both the team and the whole organisation and lead to improved patient care**

Liz Westcott<sup>1</sup>, *<sup>1</sup>Oxford Brookes University, Oxford, UK*

This presentation will share the development of a Coaching Impact Circle Framework. It will illustrate how coaching first line managers in the health sector can influence the self, the team and the organisation. Coaching of the manager develops leadership, management and team development. This intervention affects the team and then the organisation itself. A close inter-relationship can be seen between the performance and skills of the manager and those of the organisation. It demonstrates how a positive outcome, following coaching of individuals, can generate a positive feedback loop in the organisation that eventually enhances future development of health managers.

## Inequalities

**102**                    **How social capital affects health disparities in Latin America: individual power or collective balance?**

Natalia Vincens<sup>1,2</sup>, *Maria Emmelin*<sup>1</sup>, *Martin Stafström*<sup>1</sup>, *<sup>1</sup>Lund University, Malmö, Sweden, <sup>2</sup>CAPES, Brasília, Brazil*

Social capital has been advocated as a promising health and social policy target in the highly unequal Latin American setting. Our paper investigates the impact of social capital on the association between self-rated health and socio-economic status in 8 countries across Latin America, considering the income inequality levels in the past 15 years. We analyzed World Values Survey data using fixed effect regression models. We argue that the association between the individual's socio-economic status and health is asymmetrically shaped by individual social capital and income inequality level-favoring the top of the social ladder-and by public investments and collective social capital-which in contrast favors the bottom of that ladder.

**191**                    **The impact of the Syrian crisis on HPV risk factors among Syrian refugee women in Lebanon**

Dana Al-Khaled<sup>1</sup>, <sup>1</sup>Loyola University Chicago Stritch School of Medicine, Maywood, IL, USA

Objective: Examine how the Syrian crisis has impacted refugee women's risk factors for HPV infection and access to gynecological care and screening.

Method: Review of literature on HPV/cervical cancer prevalence in MENA and UN reports on social risk factors affecting Syrian refugees.

Findings: Syrian refugee women have crisis-acquired risk factors for HPV infection (gender based violence, survival sex, and early marriage). There is limited access to gynecological care and a concomitant increase in the chance of advanced stage cervical cancer at diagnosis.

Conclusion: Efforts should be made to increase Syrian refugee women's access to HPV immunization in Lebanon.

291 **Attitudes Towards Disability in Ghana: A Qualitative Analysis of the Perspectives of Caregivers Working in a Segregated Institutional Care Setting.**

Kirtana Vallabhaneni<sup>1</sup>, Mary Wickenden<sup>1</sup>, <sup>1</sup>University College London, London, UK

In Ghana, traditional perceptions of disability can lead to stigma, which perpetuates attitudinal barriers to inclusion of Persons with Disability (PwD) in society. My study aimed to explore attitudes towards disability of professional caregivers looking after severely disabled children in a segregated orphanage in semi-rural Ghana. I conducted 24 semi-structured interviews with caregivers and key informants; the data from 10 interviews was studied using inductive thematic analysis. Three core themes were identified; Shame, Potential and Acceptance. Caregivers recommended public education and advocacy to be integrated with existing cultural practices to change preconceptions, alongside employment of PwD in the community.

## Social Science and Medicine

302 **CRISPR Genome Editing Technologies: Bioethics & Biopolitics in the UK and US**

Silvia Camporesi<sup>1</sup>, <sup>1</sup>King's College London, London, UK

*This paper focuses on the emerging ethical issues of CRISPR genome editing, with a focus on the US and UK. I present the regulation of embryo research in the UK, and discuss the recent call (May 2016) by some UK scientists and bioethicists to revise the law and extend the 14-day limit to research on human embryos. I conclude with a discussion of how the CRISPR genome editing technologies debate thus far has been too narrowly focused on human embryos, at the risk of crowding out other important ethical concerns such as applications to the environment and non-human animals.*

304 **Localizing NIPT: practices and meanings of non-invasive prenatal testing in China, Italy, Brazil and the UK**

Xiaofan Zeng<sup>1,2</sup>, Letizia Zannoni<sup>3</sup>, Ilana Lowy<sup>4</sup>, Silvia Camporesi<sup>2</sup>, <sup>1</sup>BGI-Shenzhen, Shenzhen, China, <sup>2</sup>King's College London, London, UK, <sup>3</sup>University of Bologna, Bologna, Italy, <sup>4</sup>CREME 3, Paris, France

This paper is the result of a collaborative work between researchers based in UK, Italy, China and Brazil, and aims at providing a comprehensive review of practices

and meanings of Non-Invasive Prenatal Testing (NIPT) in these countries, while also highlighting the ethical implications that NIPT poses. In the first part of this paper we describe how the technology is being integrated into the 'moral economy' of prenatal testing in the different countries we analysed. The uses of NIPT differ greatly in the countries we analysed.

307 **Novel ordered stepped-wedge cluster trial designs for detecting Ebola vaccine efficacy using a spatially-structured mathematical model**

Ibrahim Diakite<sup>1</sup>, Eric Mooring<sup>2</sup>, Gustavo Velásquez<sup>1,3</sup>, Megan Murray<sup>1,2</sup>,<sup>1</sup>*Harvard Medical School, Boston, USA*, <sup>2</sup>*Harvard T.H Chan School of Public Health, Boston, USA*, <sup>3</sup>*Brigham and Women's Hospital, Boston, USA*

We constructed a spatially structured mathematical model of the EVD outbreak in Sierra Leone. We used the output of this model to simulate and compare a series of stepped-wedge cluster vaccine studies. Our model reproduced the observed order of first case occurrence within districts of Sierra Leone. The statistical power to detect a vaccine efficacy of 90% varied from 14% to 32% for standard SWCT, and from 67% to 91% for OSWCTs for an alpha error of 5%. The model's projection of first case occurrence was robust to changes in disease natural history parameters.

## Public Health and Nursing

215 **Factors associated with wasting and underweight, severe wasting and severe underweight among children aged 0-59 months in Nigeria: *Evidence from Nigeria Demographic and Health Survey (DHS), 2013***

Blessing Akombi<sup>1</sup>, Kingsley Agho<sup>1</sup>, John Hall<sup>2</sup>, Andre Renzaho<sup>1</sup>, Dafna Merom<sup>1,4</sup>,<sup>1</sup>*Western Sydney University, Penrith, NSW, Australia*, <sup>2</sup>*University of Newcastle, Callaghan, NSW, Australia*

**Background:** The rates of severe wasting and underweight in Nigeria are among the highest in the world. One in ten severely wasted children worldwide resides in Nigeria.

**Method:** This study uses data obtained from 2013 Nigeria DHS.

**Result:** After adjusting for potential covariates, factors associated with wasting, underweight, severe wasting and severe underweight were: geopolitical zone (North East, North West and North Central), mother's perceived size of child (small), and sex of child (male).

**Conclusion:** In order to meet the post-2015 sustainable development goals, policies to reduce regional inequalities related to wasting and underweight are urgently needed in Nigeria.

149 **Framing family planning in Uganda's print media. An analysis of the *Monitor* and *New Vision* newspapers.**

Marjorie Kyomuhendo<sup>1</sup>, Goretti Nassanga<sup>1</sup>, Anne Katahoire<sup>2</sup>,<sup>1</sup>*Makerere University, Department of Journalism and Communication, Kampala, Uganda*, <sup>2</sup>*Makerere University, School of Public Health, Kampala, Uganda*

Using the framing theory, this paper examines how the print media in Uganda frames family planning. A descriptive content analysis of 48 articles selected from

790 issues revealed that diagnostic frames were the most dominant depicting how and why the low utilization of family planning is a public health problem. Conversely, prognostic frames articulated solutions to enable effective family planning uptake. Audience-initiated content was substantial and the most quoted sources were health experts, government officials and donors.

Whereas framing promotes the family planning agenda, Uganda's media ought to give family planning more prominence through balanced sourcing, increased and comprehensive coverage.

## 223 Exploring compassionate nursing care using secondary analysis

Bebhinn O'Dowd Lernihan<sup>1</sup>, Anne Marie Rafferty<sup>1</sup>, Stephen Tee<sup>1</sup>, Ivanka Ezhova<sup>1</sup>,  
<sup>1</sup>*King's College London, London, UK*

**Aim:** Explore the use of patient stories as a resource for teaching compassion to nursing students

**Method:** A thematic secondary analysis of narrative interview data from patients with in-hospital experiences of nursing care

**Setting:** Transcripts from the HERG archive were selected for secondary analysis

**Results:** Patients expressed both positive and negative experiences of nursing care

**Conclusion:** Narrative interviews are a powerful source for identifying positive and negative patient experiences for learning and teaching, and the behaviours and workplace culture that shapes the practice of healthcare professionals. These can be designed into curricula and used to highlight the importance of the practice environment within education.

## Session starting Tuesday 1:00

### Human Resources and Workforce

## 068 Improving utilization of maternity care: Is contractual ANM as effective as permanent ANM at health sub-centers in India?\*

Aditya Singh<sup>1</sup>, <sup>1</sup>*University of Portsmouth, Portsmouth, UK*

With regard to Government of India's policy of deploying additional Nurse-Midwives on contractual basis, this paper, using data from District Level Household Survey, examines whether contractual nurse-midwife is as effective as permanent nurse-midwife and whether deployment of this additional nurse-midwife at health sub-centres is associated with any increase in uptake of health services. After controlling for several demand and supply factors that determine the uptake of health services, it is found that contractual nurse-midwife is not as effective as permanent nurse-midwife and the deployment of additional nurse-midwife does not lead to any substantial increase in uptake of health services.

## 292 Relating skill mixes and case mixes on population level: opportunities and limitations of country indicators and cross-national comparisons

Ronald Batenburg<sup>1</sup>, Marieke Kroezen<sup>2,1</sup>*Netherlands Institute for Health Services Research, Utrecht, The Netherlands,* <sup>2</sup>*Catholic University Leuven, Leuven, Belgium*

#### **Framework**

It is a challenge for all countries to match the size and composition of the health workforce with the changing health needs of populations.

#### **Methods**

Literature review and comparative analyses of publicly available country data and health indicators.

#### **Results**

A wide diversity can be seen among countries with regard to the existence of policy norms and data, to describe and understand the relationship between case mixes and skill mixes on population level.

#### **Conclusions**

Developing a framework of indicators can support (inter)national policies to monitor the match between case mixes and skill mixes to improve population health and services.

### 281 **Recruitment and retention of health professionals across Europe: benefits of country learning clusters**

Marieke Kroezen<sup>1</sup>, Ronald Batenburg<sup>2</sup>, <sup>1</sup>*Catholic University Leuven, Leuven, Belgium,* <sup>2</sup>*Netherlands Institute for Health Services Research, Utrecht, The Netherlands*

#### **Framework**

Many European countries are faced with health workforce shortages and the need to develop recruitment and retention (R&R) strategies.

#### **Methods**

Literature review and multiple-case study research on effective R&R interventions

#### **Results**

64 publications and 34 R&R interventions were included. Despite the lack of evidence about effectiveness, three facilitating factors were identified: having commitment and a broad support base, implementing packages of R&R measures, and context sensitivity.

#### **Conclusions**

Creating learning groups of countries with similar health system characteristics and implementation context (economic, legal, political, cultural, organizational) contributes to mutual learning, and improving R&R policies to sustain their health workforces.

### 148 **Developing Sustainable Community Health Resources in Rural Uganda with minimal outside input**

Robert Pool<sup>1</sup>, <sup>1</sup>*University of Amsterdam, Amsterdam, The Netherlands*

Hypothesis: effective health interventions can be developed in poor communities with minimal outside input and financial resources. Ethnographic research

identified social groups/processes (savings groups, motorcycle taxi driver networks) that could potentially form the basis for interventions. Target groups were stimulated to think about local health problems. They identified poor basic hygiene, and developed, financed and implemented a number of interventions (latrine building, promotion of hand washing). Comparison of baseline and post-intervention survey data and qualitative evaluation showed a marked increase in hygiene practices, reported incidence of diarrhoea, and improved community solidarity/cooperation, as well as various spin-off interventions.

## Big Data

### 107 **Building a Cardiovascular Disease Predictive Model using Structural Equation Model & Fuzzy Cognitive Map**

Manpreet Singh<sup>1</sup>, Levi Martins<sup>1</sup>, Vijay Mago<sup>1</sup>, <sup>1</sup>*Lakehead University, Thunder Bay, ON, Canada*

Cardiovascular Disease (CVD) is the leading cause of death among adult men and women. In this paper we provide a novel approach to design a robust, interactive and reasonably accurate model of CVD. Our approach is based on Structural Equation Modeling and Fuzzy Cognitive Map (FCM). We used Canadian Community Health Survey, 2012 data set to test our approach. Using the 20 most significant attributes, the designed model has 79% area under the ROC curve and 74% accuracy. We believe that adding more attributes and having an expert heart specialist panel would further improve the accuracy of the system.

### 244 **Study on Big Data in Public Health, Telemedicine and Healthcare**

Anna-Theresa Renner<sup>1</sup>, <sup>1</sup>*Gesundheit Österreich GmbH, Vienna, Austria*

The proposed study aims to identify applicable examples of use of Big Data in Health and develop policy recommendations for their implementation in the European Union. In order to validate and refine the policy recommendations that will be developed together with an expert group in the course of the study, we would like to present and discuss the policy recommendations at the International Health Conference 2016. In that way the drafted policy recommendations can be validated by consultation of the public. The comments and discussion will be taken into account for the final version of the policy recommendations.

### 206 **The longitudinal trajectory of post-surgical % total weight loss among middle-aged women who had undergone bariatric surgery**

Dong-Chul Seo<sup>1</sup>, Chung Gun Lee<sup>2</sup>, <sup>1</sup>*Ewha Womans University, Seoul, Republic of Korea*, <sup>2</sup>*Seoul National University, Seoul, Republic of Korea*

We analyzed women who received bariatric surgery at 40-65 years (N = 158,292) whose pre-operative BMI was  $\geq 30$  kg/m<sup>2</sup> and examined the trajectory of post-surgical % total weight loss (%TWL) using sequential generalized estimating equations models. For gastric banding, %TWL increased rapidly right after bariatric surgery and started to decrease around 1 year after surgery. For Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy, %TWL overall did not show remarkable changes from around 1 year after surgery. Middle-aged female bariatric patients are likely to achieve the highest %TWL if they receive RYGB and their pre-operative BMI is 40 or higher.

147

Using Electronic Medical Record Administrative data Linked Database (EMRALD) to measure the coordination of information and wait times in primary care in Ontario, Canada.

Liisa Jaakkimainen<sup>1</sup>, <sup>1</sup>*Institute for Clinical Evaluative Sciences, Toronto, Ontario, Canada*, <sup>2</sup>*University of Toronto, Toronto, Ontario, Canada*

Framework: The receipt of consultant notes and discharge summaries by family physicians (FPs) are associated with fewer medication errors, decreased readmissions and better chronic disease management. Methods: By utilizing information found in FPs Electronic Medical Record (EMR) and linking this information to health administrative data, we were able to quantify the coordination of information throughout the health care sector. Results: Not quite 50% of surgical/medical consultation visits, barely 20% of hospital discharges and only 10% of emergency visits have notes received by a FP within 90 days. Conclusions: System structures are needed to improve the transfer of information to FPs.

## Mental Health

105

Mental health in schoolchildren experiencing war: a cross-sectional study from inside Syria

Jon Perkins<sup>1</sup>, Maiss Ajeeb<sup>2</sup>, Juliet Saad<sup>3</sup>, Lina Fadel<sup>3</sup>, <sup>1</sup>*University of Edinburgh, Edinburgh, UK*, <sup>2</sup>*Damascus University, Damascus, Syria*, <sup>3</sup>*Heriot-Watt University, Edinburgh, UK*

The Syrian crisis is entering its sixth year. The impact on children has been great with many experiencing traumatic events. The effects of war on child mental health are well documented. However, logistic and safety concerns mean that mental health evaluation can be difficult whilst hostilities are on-going. This study addresses this problem and documents the growing mental health burden for children inside Syria. Screening tools for depression, anxiety and PTSD were applied to 500 children across two different cities inside the country. Our results are important for mental health responders and allied professionals working in Syria.

159

Antidepressant prescribing to children and adolescents in Canadian primary care

Rachael Morkem<sup>1</sup>, <sup>1</sup>*Queen's University, Kingston, Ontario, Canada*, <sup>2</sup>*University of Calgary, Calgary, Alberta, Canada*

**Background:** Between 2002 and 2004 regulatory agencies in the UK, USA and Canada issued a controversial 'black-box' warning for prescribing antidepressants (ATD) to children and adolescents stating an increased risk of suicidal behaviour. **Objective:** To understand how primary care providers have reacted to the controversial warnings by evaluating ATD prescribing to children and adolescents (5-18 years old). **Design:** Retrospective longitudinal database study using data from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN). **Results:** Both prevalence and incidence of ATD prescribing dropped significantly from 2006 to 2009 but have since risen to higher than pre 'black-box' warning levels.

020

Primary care approach to commissioning high-quality integrated care for people with common mental health disorders

Oren Lahak<sup>1</sup>, Noa Shemesh<sup>1</sup>, <sup>1</sup>*Psychological clinic, tel aviv, Israel*

In this article, we will describe an integrated model for primary care clinicians, managers and commissioners collaborate to develop local care interventions. This model promote access to services for people with common mental health disorders. The intervention is managed by primary care physicians (GP's) and primary care psychologists. The collaboration between GP's and primary care psychologists improves communication between primary care professions. A study of psychological intervention services shows that GP's referrals of people with symptoms of common mental health disorders promote better access for different sectors of the community and present recovery outcomes with fewer sessions of treatment

**140**      **Re-thinking recovery in post conflict settings: supporting communities in Colombia**

Rochelle Burgess<sup>1</sup>, [Laura Fonseca](#)<sup>2</sup>, <sup>1</sup>*London Metropolitan University, London, UK*,  
<sup>2</sup>*Universidad de La Sabana, Bogota, Colombia*

Framework: Critical approaches to recovery affirm the importance of political, economic and social contributions to distress and well-being. This is crucial in post-conflict settings where recovery processes intersect with everyday violence. Methods: A review of Latin American literature on the psycho-social impacts of conflict and critical approaches to recovery inform a theoretical model of recovery addressing structural, cultural and psycho-social concerns. Hypotheses: The proposed model will enable recovery interventions to address complex needs and highlight often obscured local realities of post-conflict recovery. Result & conclusions: Findings will present preliminary outcomes from interventions utilising this model, delivered by the National Historic Center of Colombia.

## Social Science and Medicine

**017**      **An asset-based intervention with Tuberculosis groups in Indonesia**

[Christa Dewi](#)<sup>1,2</sup>, Lesley Barclay<sup>1,2</sup>, Shawn Wilson<sup>1,2</sup>, Megan Passey<sup>1,2</sup>, <sup>1</sup>*The University of Sydney, Sydney, NSW, Australia*, <sup>2</sup>*University Centre for Rural Health, Lismore, NSW, Australia*

This study describes an alternative way of working with the community in three villages in Flores, Indonesia to reduce their dependency on TB services provided by non-government organisations (NGOs). The traditional approach, which aims to fix community's problems, has been applied by NGOs in this setting for over ten years. Data collection included interviews, informal individual discussions, focus group discussions, workshops and field observations. The intervention enabled local TB groups to be more confident and capable in managing their own TB program and generated significant change in relation to the TB groups' perceptions of themselves and their leadership capacity.

**030**      **Framing access to quality medicines in the Mekong Region: Norm diffusion and the problem of poor-quality antimalarial medicines.**

[Marie Lamy](#)<sup>1</sup>, <sup>1</sup>*London School of Hygiene and Tropical Medicine, London, UK*

This paper is a qualitative study of the public health challenge of poor-quality antimalarial medicines in the Mekong. Here, we analyse the international norm of access to safe, efficacious and affordable medicines, its diffusion, and the policy implications on tackling the problem of substandard and falsified medicines. This study is based on sixty interviews with local stakeholders. This study suggests

that a lack of a shared cognitive framework around the problem of poor-quality medicines impedes on national and regional efforts to tackle the problem of medicine falsification and to enforce the cross-border supply chain of only good-quality essential medicines.

**158 Can I be a good provider? A critical examination of women community health workers in India**

Sonia Verma<sup>1</sup>, Sanghmitra Acharya<sup>1</sup>, <sup>1</sup>*Jawaharlal Nehru University, New Delhi, India*

Women form a significant share of Community Health Workers (CHWs) in India. Studies have marked that subordinate position of women in the family is extended to the workplace. Caste is an important socio-psychological phenomenon in all spheres of Indian social life. Women CHWs are not as efficient as male CHWs worker both on fields as well as in health centers. The study used a mixed methods approach that included qualitative and quantitative components. The bargaining power of women in the workplace is limited due to their socio-economic background. Women are subjected to sexual exploitation, along with other exploitative situation.

**305 How the everyday realities of care are re-shaping work-based learning: developing learning organisations in primary care.**

Anne McKee<sup>1</sup>, <sup>1</sup>*King's College London, London, UK*

Health policy reforms have changed the NHS as a place in which to work and learn. Understanding those changes is urgent as views about how to best progress a quality improvement agenda are sharply contested.

Learning organisations are established as an effective method for quality improvement.

This paper reports an action research study to develop general practices as learning organisations. Theoretical frameworks deployed were *Learning Organisations, Thinking Organisations and Grounded Theory*.

Findings identify how everyday working realities in general practice enable and challenge practices becoming a learning organisation. Discussion explores how working realities require a re-thing of supporting work-based learning.

## Health Policy and Systems

**131 Noise pollution and its perceived effect: the experience of a Nigerian community**

Nurah Ashalejo<sup>1</sup>, Tinuola Odugbemi<sup>1</sup>, <sup>1</sup>*College of Medicine of the University of Lagos, Lagos, Nigeria*

Theory: Negative health effects have been shown to occur in humans when noise exposure is prolonged and exceeds certain levels. This study determined the perception of noise and its health related effects among residents of a community in Lagos, Nigeria.

Methods: A cross-sectional survey was carried out among 270 adult residents, recruited using a multi-stage sampling technique.

Results: 94.5% knew that noise is harmful to human health. The main source of noise was generators (87.8%) and 66.3% reported sleep disturbance as the main health-related effect.

Conclusion: Effective noise control policies are needed to avoid disturbance and improve quality of life

**115 Health Systems Readiness to Manage the Hypertension Epidemic in the primary health care facilities in the Western Cape, South Africa**

Rodrigue Deuboue Tchialeu<sup>1</sup>, Sanni Yaya<sup>1</sup>, Ronald Labonte<sup>1</sup>, <sup>1</sup>*University of Ottawa, Ottawa, ON, Canada*

Developing countries are undergoing a process of epidemiological transition from infectious to non-communicable diseases, described by the United Nations Secretary General Ban Ki-Moon as "a public health emergency in slow motion". However, there is an important gap between emerging high-level policies and recommendations, and the near-absence of practical guidance and experience delivering long-term medical care for non-communicable diseases within resources-limited health systems. To address this gap, our study will consist of field investigations to determine the minimum health systems requirements to ensure successful delivery of antihypertensive medications when scaling-up interventions to control the hypertension epidemic.

**061 A comparative study of primary child health care in 30 EU countries**

Ingrid Wolfe<sup>1</sup>, Delanjathan Devakumar<sup>2</sup>, Sapfo Lignou<sup>1</sup>, <sup>1</sup>*King's College London, London, UK*, <sup>2</sup>*University College London, London, UK*

Disparities in the health status of European children and variations across health systems suggest that many children are likely to be receiving suboptimal primary care, with adverse implications for the health of current and future European populations. This paper investigates the characteristics and qualities of primary health care models for children and young people in 30 European countries as part of MOCHA, a large EU-funded study. Universally applicable clinical scenarios form the basis of case studies for exploring the quality of and access to care across member states. We present results of this complex case study-based analysis.

**219 Taking the heat or taking the temperature? A qualitative study of a large-scale exercise in measurement for improvement**

Natalie Armstrong<sup>1</sup>, Liz Brewster<sup>2</sup>, Carolyn Tarrant<sup>1</sup>, Ruth Dixon<sup>1</sup>, Janet Willars<sup>1</sup>, Maxine Power<sup>3</sup>, Mary Dixon-Woods<sup>1</sup>, <sup>1</sup>*University of Leicester, Leicester, UK*, <sup>2</sup>*Lancaster University, Lancaster, UK*, <sup>3</sup>*Haelo, Salford, UK*

Measurement for improvement is challenging - blame dynamics and inequity aversion can influence data collection and reporting. The NHS Safety Thermometer is an improvement tool measuring four common harms and represents the first attempt to measure harms at scale across diverse health settings.

We conducted a qualitative study comprising observations of data collection and stakeholder interviews.

Despite being presented as a tool to drive local improvement, many staff were concerned about the potential for data to be appropriated for performance

management. This often negatively influenced their engagement with data collection and use. The current policy context appears problematic for measurement systems that are established specifically to secure improvement.

## Public Health

### 119 **Making low birth-weight matter: a community-based approach**

Susanna Rance<sup>1</sup>, Angela Harden<sup>1</sup>, Patrick Tobi<sup>1</sup>, Judith Stephenson<sup>2,1</sup>*University of East London, London, UK, <sup>2</sup>University College London, London, UK*

In Newham, an ethnically diverse London borough with high deprivation levels, 10.4% of babies have low birth-weight. This project is comparing stakeholders' perspectives on the issue and co-designing improvement measures with community engagement. Epidemiologists and clinicians focus on measurement, identifying babies at risk, and avoiding catch-up growth that can lead to diseases in later life. Parents' main interest is in prevention, but they report unequal access to information about healthy diet in pregnancy and support for baby feeding and weaning.

### 091 **Knowledge, Attitudes and Practices Surrounding Voluntary Blood Donation Amongst University Students in Lucknow, Uttar Pradesh, India**

Rohini Krishnan<sup>1</sup>, Sharmani Barnard<sup>1</sup>, Paula Baraitser<sup>1</sup>, <sup>1</sup>*King's College London, London, UK*

Background: Blood is a precious medical commodity in many countries, including India, therefore, improving practices voluntary blood donation rates is essential.

Methodology: A knowledge, attitudes and practices questionnaire was conducted on 199 students from two universities. Data was analysed using Statistical Package for the Social Sciences and chi-squared tests.

Results: Amity University Lucknow students donated more (65.1%) than Lucknow University students (34.9%). The primary reason for non-donation (55.1%) was having never thought about it.

Conclusion: Policies should improve blood donation awareness amongst the public. Strategies which improve accessibility and ease of donation should be promoted.

### 183 **High drinking water sodium concentrations and raised blood pressure in salinity affected coastal areas**

Paolo Vineis, Pauline Scheelbeek<sup>1</sup>, <sup>1</sup>*Imperial College, London, UK*

Millions of coastal inhabitants in South-east Asia have been experiencing increasing sodium concentrations in their drinking-water sources, likely to be (partially) caused by climate change. The health impact of high sodium intake through water - rather than food - remains unknown, as well as the prevention potential of low-salt (rainwater-based) drinking-water alternatives.

We conducted a longitudinal study among 581 coastal participants and found that decreases in drinking-water sodium concentrations were significantly associated with decreases in blood pressure of its users. For each 100mg/l decrease in

sodium, blood pressure dropped on average with 0.95/0.57 mmHg and odds of hypertension with 16%.

**041 Targeting interventions that support patient decision-making about treatment for sleep apnoea. From a grounded theory study.**

Kim Ward<sup>1</sup>, Merryn Gott<sup>1</sup>, Karen Hoare<sup>1</sup>, <sup>1</sup>*The University of Auckland, Auckland, New Zealand*

Sleep research argues that patients underuse CPAP for sleep apnoea. Therefore, studies have focused on resolving difficulties using CPAP. In contrast, our grounded theory study used semi-structured interviews to focus on experiences of adults successfully living with CPAP (n=12), and their partners (n=4). Participants described *bargaining and balancing life with CPAP*. They were active, reasoned decision-makers in their healthcare. Participants emphasised self-motivation and developed supportive strategies via a dynamic decision-making process based on clinical information and personal beliefs about treatment. Future studies should examine the efficacy of targeted and tailored interventions that support patient decision-making when choosing this therapy.

## Sessions starting Tuesday 15:40

### Public Health

**211 Improving human health through reducing exposure to arsenic from water and foods**

Parvez Haris<sup>1</sup>, <sup>1</sup>*De Montfort University, Leicester, UK*

Arsenic is a well known carcinogen with multiple effects on human health including development of different types of cancers. Hundreds of millions of people worldwide are exposed to arsenic through contaminated water and foods, especially rice. Inductively coupled plasma mass spectrometry has been used to analyse rice, water and human urine samples. There is a correlation between urinary arsenic levels with the consumption of rice and arsenic contaminated water. We have identified varieties of rice that are low in arsenic that can reduce the burden of arsenic exposure. We are also developing sustainable methods for removal of arsenic from water.

**146 Linking administrative data and primary care data to determine disease burden and patterns of care in large populations**

Karen Tu<sup>1,2</sup>, Jessica Widdifield<sup>1,3</sup>, Debra Butt<sup>2</sup>, Noah Ivers<sup>1,2</sup>, Liisa Jaakkimainen<sup>1,2</sup>, <sup>1</sup>*ICES, Toronto, Ontario, Canada*, <sup>2</sup>*University of Toronto, Toronto, Ontario, Canada*, <sup>3</sup>*McGill University, Montreal, Quebec, Canada*

Framework: Linking administrative and primary care EMR data allows for capitalization of the unique strengths of both data sources.

Methods: Through the Electronic Medical Record Administrative data Linked Database (EMRALD) we determined the accuracy of administrative data algorithms in identifying patients with a variety of diseases.

Results: We found the administrative data to be reasonably accurate and applied these algorithms to the entire population of Ontario, Canada to examine trends in disease incidence and prevalence over time.

Conclusions: EMR data linked to administrative data can be a valuable tool for identifying patients with a variety of diseases in large populations.

**048 Social Prescribing: integrating primary care and Community Assets for Health**

Marcello Bertotti<sup>1</sup>, Caroline Frostick<sup>1</sup>, Gopal Netuveli<sup>1</sup>, Dawn Carnes<sup>2</sup>, <sup>1</sup>*University of East London, London, UK*, <sup>2</sup>*Queen Mary University of London, London, UK*

The social element of the biopsychosocial model in the UK healthcare service is often overlooked. By integrating community organisations with primary care, *Social prescribing* promises to address this imbalance, reduce costs and improve care.

A mixed method approach (with control) was used to assess the health outcomes of a large social prescribing pilot in east London (UK) involving 23 surgeries, and 737 participants.

We found a gap between quantitative and qualitative evidence with the latter showing much better health outcomes for participants. This points to the need for more adequate measures to capture health changes, perhaps considering patient generated indexes.

**205 Longitudinal trajectory of the relationship between self-esteem and substance use from adolescence to young adulthood**

Dong-Chul Seo<sup>1</sup>, Chung Gun Lee<sup>2</sup>, Dahye Chung<sup>1</sup>, <sup>1</sup>*Ewha Womans University, Seoul, Republic of Korea*, <sup>2</sup>*Seoul National University, Seoul, Republic of Korea*

This study examined the longitudinal trajectory of substance use in relation to self-esteem from adolescence to young adulthood. Data were drawn from the National Longitudinal Study of Adolescent Health. Three waves of public-use datasets (N = 6,504) were analyzed using generalized estimating equations. Although self-esteem was a significant predictor for binge drinking and marijuana and cocaine use at 15 years of age ( $ps < .001$ ), the relationship between self-esteem and use of each of these substances became weaker over age. At age 21, self-esteem was no longer able to predict binge drinking and marijuana use in the controlled model.

**216 Socioeconomic inequality of stunting among children aged 0-59 months in Nigeria: Evidence from Nigeria Demographic and Health Survey (DHS), 2003-2013**

Blessing Akombi<sup>1</sup>, Kingsley Agho<sup>1</sup>, John Hall<sup>2</sup>, Andre Renzaho<sup>1</sup>, Dafna Merom<sup>1</sup>, <sup>1</sup>*Western Sydney University, Penrith, NSW, Australia*, <sup>2</sup>*University of Newcastle, Callaghan, NSW, Australia*

**Introduction:**

Poor nutritional status of children is a major public health problem in Nigeria.

**Method:**

The sample included 38122 children aged 0-59 months from the Nigeria DHS data from 2003-2013 period. Trends in stunting were examined against socioeconomic factors.

**Result:**

The prevalence of severe and moderate stunting decreased from 34% to 20% and from 45% to 35% respectively between 2003 and 2013. However, trend results indicated that moderate stunting and severe stunting were both

significantly higher among uneducated parents, poor households and unemployed mothers.

076 **The impacts of piped water on water quality, sanitation, hygiene and health in rural households of north-western Bangladesh - a quasi-experimental analysis**

Mohammad Monirul Hasan<sup>1</sup>, Nicolas Gerber<sup>2</sup>, <sup>1</sup>*Center for Development Research (ZEF), U Bonn, Bonn, Germany, Germany,* <sup>2</sup>*Center for Development Research (ZEF), U Bonn, Bonn, Germany, Germany*

We investigate the impacts of piped water on water quality, sanitation, hygiene and health outcomes in marginalized rural households of north-western Bangladesh, using quasi-experimental analysis. Government organization- the Barindra Multipurpose Development Authority (BMDA) – provided piped water to rural areas where potable water was scarce. Using propensity score matching method in the framework of theory of change, the study finds that BMDA piped water use generates positive impact on water access, time savings, hand washing and under-five child weight but no impact on water quality (count of pathogen bacteria *E. coli* per 100 ml of water) and diarrhoea reduction.

## Paediatrics

193 **Translating Research Into Practice: Taking an Evidence-Based Approach to Child Obesity Treatment**

Susan Connor<sup>1</sup>, Kathryn Wesolowski<sup>1</sup>, <sup>1</sup>*University Hospitals Rainbow Babies & Children's Hospital, Cleveland, Ohio, USA*

Approximately one third of British and US children are overweight and 15% are obese. This session synthesizes the body of research in childhood obesity treatment to determine how pediatricians and children's hospitals can best meet the needs of overweight/obese children and their families. While the internationally recommended treatment includes a behavioral family lifestyle intervention with dietary and physical activity advice, there is limited evidence to support the effectiveness of any individual component. Nonetheless, there is convincing evidence regarding program components most likely to lead to success in promoting family level lifestyle change and meaningful weight reduction in children and adolescents.

083 **Epidemiology of Traumatic Brain Injuries in U.S. Children Under 1 Year of Age**

Susan Connor<sup>1</sup>, Kathryn Wesolowski<sup>1</sup>, <sup>1</sup>*Rainbow Babies & Children's Hospital, Cleveland OH, USA*

Traumatic brain injury (TBI) is the leading cause of death and disability in young children in the U.S. For children under 1, most cases result from falls. National injury surveillance data for 2010-2012 were analyzed to better understand mechanism of fall-related infant TBI and identify opportunities for health care intervention. In this sample, 10,881 children were treated for TBI. Furniture falls (49%) were the primary mechanism of injury, most often related to unsafe sleep practices. Pediatricians are in a key position to address the parental supervision practices that underlie many fall-related head injuries in children's first year of life.

099 **Asset based work in the co-design of community-based diabetic services for children and young people**

Darren Sharpe<sup>1</sup>, <sup>1</sup>*University of East London, London, UK*

This paper critically discusses the concepts and theories linked to asset based approaches in the development of holistic person-centred and integrated community care for the management of diabetes among vulnerable groups of children and young people (CYP). Researchers based at IHHD, UEL worked with groups of young people aged 16-25 with diabetes as peer educators, to help define and better understand the challenges experienced by disadvantaged groups of CYP's living with diabetes. In collaboration with Newham CCG, data were collected and analysed to identify what works best for a community marked by its super-diversity, fluidity and youthfulness.

## Health Informatics

### **089 Smart clinical alerts in Intensive Care Unit and hospital**

Vitaly Herasevich<sup>1</sup>, <sup>1</sup>*Mayo Clinic, Rochester, MN, USA*

The expansion of EMR provides an unprecedented opportunity to use syndrome surveillance technology for the development of "smart alarms" or sniffers that improve the safety of critically ill hospitalized patients. During this presentation, speaker will address "Failure to rescue" concept in clinical diagnostic alerts and also will outline the problem of information overload from unnecessary multiple clinical alerts while presenting some key potential steps to address this issue.  
Learning Objective 1: Identify major problems with threshold-based alerts  
2: Define rule based-alerts or sniffers  
3: Summarize methods for alerts evaluation

### **122 Identifying Users and Activities from Brain Wave Signals Recorded from a Wearable Headband**

Glavin Wiechert<sup>1</sup>, Matt Triff<sup>1</sup>, Zhixing Liu<sup>1</sup>, Zhicheng Yin<sup>1</sup>, Shuai Zhao<sup>1</sup>, Ziyun Zhong<sup>1</sup>, Pawan Lingras<sup>1</sup>, <sup>1</sup>*Saint Mary's University, Halifax, Nova Scotia, Canada*

The signals from the wearable devices consist of long and varying length of sequences across multiple channels. This paper describes how data collected from wearable devices can be distilled to create more manageable representations that can be used for meaningful data mining activities. The proposed approach is demonstrated through data collected from a wearable headband that recorded brain signals of a number of participants performing various tasks. The distilled dataset was successful in identifying both users and activities using a number of classification techniques. The paper also compares the decision tree approaches with distance based approaches for the wearable signals.

### **199 Social media for research dissemination**

Gemma Ryan<sup>1,2</sup>, Hanah Sfar-Gandoura<sup>2</sup>, <sup>1</sup>*University of Derby Online Learning, Derby, UK, <sup>2</sup>Leicestershire Partnership NHS Trust, Leicester, UK*

Aim: to critically analyse the use of social media to engage, listen and inform parents of children with ADHD on clinical research.

Theory: Critical realism

Methods: Observation and qualitative content analysis combined with Facebook analytics was used to evaluate the levels of engagement and interaction with different types of research information. A qualitative evaluation of the differences between Facebook and Twitter.

Results: Over 1400 people from 45 nations have engaged with the pages.

Conclusion: Patients and the public are eager to engage and understand clinical research and social media is an appropriate way to disseminate this.

## Workforce and Nursing

### 262 **Managing Exposure: A Grounded Theory of Burnout and Resilience for Critical Care Nurses**

Jennifer Jackson<sup>1,2</sup>, <sup>1</sup>*King's College London, London, UK*, <sup>2</sup>*Athabasca University, Athabasca, Alberta, Canada*

Workplace adversity negatively impacts critical care nurses. This grounded theory investigation was conducted at a large, multi-site urban hospital, to learn more about nurse resilience in response to workplace adversity. Eleven critical care nurses completed open-ended interviews, discussing resilience and burnout. The resultant theory is MANAGING EXPOSURE: A Grounded Theory of Burnout and Resilience in Critical Care Nurses. To address workplace adversity, nurses enact the process of MANAGING EXPOSURE. Nurses manage exposure through a variety of techniques, and may experience burnout or resilience. Nurse leaders can reduce workplace adversity and drive the process of MANAGING EXPOSURE toward resilience.

### 287 **The use of research evidence in policies to improve geographical access to human resources for health in Brazil**

Ana Paula Cavalcante de Oliveira<sup>1,2</sup>, Mariana Gabriel<sup>3,4</sup>, Mario Roberto Dal Poz<sup>5</sup>, Gilles Dussault<sup>1</sup>, <sup>1</sup>*Global Health and Tropical Medicine Centre, Unidade de Saúde Pública Internacional e Bioestatística, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisbon, Portugal*, <sup>2</sup>*Scholarship from CNPq, Brazil, Brazil*, <sup>3</sup>*Department of Community Dentistry, Faculdade de Odontologia da Universidade de São Paulo, Sao Paulo, Brazil*, <sup>4</sup>*Scholarship from CAPS, Brazil, Brazil*, <sup>5</sup>*Social Medicine Institute, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil*

Theory/framework: Brazil's policy-makers face the challenge of attracting and retaining health workers in underserved areas. There is much research evidence on this issue, but the question is if and how it reaches policy-makers and is used by them. Methods/hypotheses: We interviewed policy-makers and stakeholders to analyze how the "More Doctors" program was designed and is implemented. Results: The analysis shows that research evidence was indeed used in the formulation of this policy, but there is no agreement among stakeholders on whether it was used adequately. Conclusions: Research evidence can inform policy-making, but its benefits depend on how it is used.

### 143 **EU nurse mobility to the UK: A multilevel analysis of Portuguese nurses in England**

Claudia Leone<sup>1</sup>, Anne Marie Rafferty<sup>1</sup>, Janet E. Anderson<sup>1</sup>, Gilles Dussault<sup>2</sup>, <sup>1</sup>*King's College London, London, UK*, <sup>2</sup>*Institute of Hygiene and Tropical Medicine, Lisbon, Portugal*

This sequential mixed-method study aims to examine the implications of European nurse recruitment for the cyclical nursing shortages in the English NHS from a policy, organisational and individual perspectives. It started by extending the Registered Nurses Forecasting (RN4CAST) study evidence base with newly

collected data from Portuguese nurses working in acute care hospitals to make sense of the labour-market dynamics affecting the profession and to better understand their practice environment and leaving intentions. In the qualitative phase, experiences and perspectives of Portuguese nurses, NHS organisations and policy informants will be collected through semi-structured interviews and analysed with framework method.

## e-Health and Big Data

### 080 **Enabling data-driven health service efficiencies and effectiveness: Enhancing health relationships for greater value with myPace**

Michelle Harricharan<sup>1,2</sup>, Dave Fletcher<sup>2,1</sup>, Julie Barnett<sup>1,2</sup>, Raymond Gemen<sup>3,2</sup>, Anne de Looy<sup>4,2</sup>, <sup>1</sup>*University of Bath, Bath, Somerset, UK*, <sup>2</sup>*White October, Oxford, Oxon, UK*, <sup>3</sup>*EFUIC - European Food Information Council, Brussels, Belgium*, <sup>4</sup>*EFAD - European Federation of the Associations of Dietitians, Plymouth, UK*

Scientific evidence has consistently shown that practitioner-patient relationships are central to driving health outcomes– for both patients and practitioners. Better relationships mean better outcomes across the health value chain. Relationships, however, are expensive. They require extensive resource use. We worked iteratively with European practitioners to develop technology to enhance practitioner-patient relationships and health outcomes with low resource use. The behavioural and clinical data from user engagement with the technology can transform health service delivery, identifying objectively what works (and doesn't), for whom, in what contexts.

### 266 **Effectiveness of SMS technology in monitoring childhood malnutrition in children under five years in the Millennium Villages Project in Ruhira, Uganda**

Shohinee Sarma<sup>1,7</sup>, Bennett Nemser<sup>2</sup>, Heather Cole-Lewis<sup>3</sup>, Nadi Kaonga<sup>4</sup>, Joel Negin<sup>5</sup>, Andrew Kanter<sup>6</sup>, <sup>1</sup>*Mailman School of Public Health, Columbia University, New York, NY, USA*, <sup>2</sup>*Columbia University, New York, NY, USA*, <sup>3</sup>*Department of Biomedical Informatics, Columbia University, New York, NY, USA*, <sup>4</sup>*Tufts University School of Medicine, Boston, MA, USA*, <sup>5</sup>*Sydney School of Public Health, University of Sydney, Sydney, Australia*, <sup>6</sup>*Clinical Biomedical Informatics and Epidemiology, Columbia University, New York, NY, USA*, <sup>7</sup>*McMaster University Michael G. DeGroot School of Medicine, Hamilton, ON, Canada*

**Theory:** The Millennium Village Project addresses inequalities in rural healthcare access across sub-Saharan Africa. Use of SMS technology by community health workers impacts timely malnutrition screening and follow-up in Ruhira, Uganda.

**Methods:** A cohort of 10, 242 under-five children was screened using either SMS or paper forms. An adjusted multivariate logistic regression analyzed impact of each on timely follow-ups within 90 days.

**Results:** Children received more timely follow-ups with initial and consistent SMS use than paper forms (Adjusted OR= 3.23 [95% CI: 2.91-3.60]).

**Conclusion:** Consistent SMS use with reminder alerts has positive implications for rural Paediatric monitoring and disease prevention.

### 239 **The effect of Crisis Resolution Home Treatment on Labour Market Outcomes; a Danish study**

Emely Ek Blæhr<sup>1</sup>, Pia Vedel Ankersen<sup>1</sup>

<sup>1</sup>DEFACTUM, Aarhus, Central Region Denmark, Denmark

Crisis Resolution Home Treatment (CRHT) is a new approach to treat psychiatric patients to cope better in daily life. In a pre and post study, the effect of CRHT on employment in an urban area is compared with another area, where patients were hospitalised. First, a propensity score matching made the two areas comparable and estimated; Second, the propensity score matching is combined with a difference-in-difference estimator to estimate the treatment-effect. We found CRHT is a safe treatment with less suicide attempts and stimulate to a higher employment rate. Using CRHT could imply savings on different kinds of social securities.

## Sessions Starting Wednesday 9:00

### Health Policy in Developing Countries

064 **"Professional Movements" and the Struggle for Universal Healthcare in the Developing World**

Joseph Harris<sup>1</sup>, <sup>1</sup>*Boston University, Boston, MA, USA*

At a time when the world's wealthiest countries struggle to make healthcare available to everyone, this presentation will explore the puzzle of how and why developing countries are making commitments to universal healthcare. In the absence of pressure from those in need, my work draws out the surprising role played by "professional movements" - elites from esteemed professions - who forge progressive change on behalf of those in need but who derive no benefit themselves. This interview-based research uses the cases of Thailand and Brazil to show how state bureaucracies confer professional movements with advantages in battles with professional associations.

222 **Equity impact of user fees exemption for caesarean deliveries in public health facilities in Senegal**

Divya Parmar<sup>1</sup>, <sup>1</sup>*City University London, London, UK*

In Senegal, one in 54 women face the lifetime risk of dying due to pregnancy or childbirth-related complications. To improve maternal health outcomes, Senegal abolished user fees for caesarean deliveries in public health facilities. This study investigates the impact of this initiative. Using household survey data, we conduct difference-in-difference and multivariate regressions to study the impact of this exemption across different groups based on their socio-economic status, place of residence and mother's education. Although caesarean deliveries in Senegal has increased; this increase is not equitable. There is a need for improving access among the most vulnerable groups and regions.

209 **Developing the Self-Organizing Health Intervention: Some Lessons Learned from the Developing Sustainable Community Health Resources in Poor Settings in Uganda (CoHeRe) Project**

Daniel de Vries<sup>1</sup>, Denis Muhangi<sup>2</sup>, Robert Pool<sup>1</sup>, <sup>1</sup>*University of Amsterdam, Amsterdam, The Netherlands*, <sup>2</sup>*Makerere University, Makerere, Uganda*

Social science critiques have suggested that externally driven health interventions common to health service models may be inherently unsustainable

due to a lack of community ownership, paternalistic or culturally inappropriate assumptions, or confidence gaps between biomedical models and indigenous health practices. Since 2011, the CoHeRe project has been mixing ethnographic research with a pilot intervention in rural Uganda to document how linkages to formal health systems and health outcomes could be motivated by minimal inputs capitalizing on existing community health resources. This paper summarizes some of the lessons learned during this journey towards the (im)possibility of "self-organizing" health interventions.

260

### Health systems in BRICS countries: Challenges and learnings

Pedro Arruda<sup>1</sup>, [Mary MacLennan](#)<sup>2</sup>, <sup>1</sup>*UNDP International Policy Centre for Inclusive Growth, Brasilia, Brazil*, <sup>2</sup>*Privy Council Office, Government of Canada, Ottawa, Canada*

This work provides an updated account of how the health systems of BRICS countries have evolved and are evolving. It focuses on challenges and potential lessons to be learned as the countries move along the development continuum. It takes a descriptive lens to draw out broad themes. The article discusses areas such as equity and the role of the private sector, the latter particularly in South Africa and India. Learning from past successes and challenges could help inform the health system trajectories of other countries and contribute to the discourse on health financing.

\*BRICS: Brazil, Russia, India, China, South Africa

## Public Health

235

### Prevalence and determinants of Domestic Violence among the attendees of an Antenatal Clinic in a tertiary care teaching hospital in Delhi, India

[Suneela Garg](#)<sup>1</sup>, Mongjam Meghachandra Singh<sup>1</sup>, Archana Ramalingam<sup>1</sup>, Indu Bala<sup>1</sup>, Rajani Singh<sup>1</sup>, Komal Tiwary<sup>1</sup>, *Maulana Azad Medical College, New Delhi, India*

Apparently healthy pregnant women with a gestational age of < 20 weeks were interviewed about socio demographic details, marital history, antenatal history and presence of domestic violence. Of the 428 pregnant women, 31.3% suffered from domestic violence. Emotional and verbal abuse (58.2%) was the most common form. Women with younger age at marriage and with assisted conception were at a higher risk for suffering from domestic violence. Pregnant wives of men with a lower level of education, unemployment or employment as unskilled labourers and addiction to alcohol and/or tobacco were at higher risk for domestic violence.

023

### Nutritional supplement use among school level athletes in Sri Lanka.

[Eashaan Dassanayaka](#)<sup>1</sup>, Nishan Silva<sup>1,2</sup>, <sup>1</sup>*International Institute of Health Sciences, Welisara, Sri Lanka*, <sup>2</sup>*National Hospital of Sri Lanka, Colombo, Sri Lanka*

Sport supplement use is common among school level athletes in Colombo. But their practices and recommendations are unknown. The Objective of the study was to assess the knowledge and practices of athletes on supplement use. A descriptive study was done on 130 conveniently selected school athletes. 62.3% took a nutritional supplement of which 56.9% took without a doctor's recommendation. Only 13.1% would go to a physician to find information on supplements. 56.9% believes with doping body muscle can change. 45% disagrees

respecting individuals who dope. 2.3% have taken banned substances. The use of supplement without consultation may be dangerous for Athletes.

231 **Predictors of Stillbirth in Nepal: Evidence from the Nepal Demographic and Health Survey (DHS) 2001-2011**

Pramesh Ghimire<sup>1</sup>, Kingsley Agho<sup>1</sup>, Andre Renzaho<sup>1</sup>, Camille Raynes-Greenow<sup>2</sup>,  
<sup>1</sup>*Western Sydney University, Sydney, NSW, Australia*, <sup>2</sup>*Sydney University, Sydney, NSW, Australia*

**Background**

Fetal death is a major public health problem. There has been little research of the burden of stillbirth in Nepal. This study identifies predictors of stillbirth in Nepal.

**Methods**

Pooled 2001, 2006 and 2011 DHS's were analysed. The pregnancy outcome of 18,386 women whose pregnancy was at least 30 weeks were examined using a multilevel binary logistic regression model.

**Results**

The odds of stillbirth were significantly higher among woman from the mountain region, had primary education, whose occupation was agriculture and those who were Hindu.

**Conclusions**

Stillbirth occurred more frequently among women with lower socio-economic status.

177 **Our future health: Perspectives on public health and health care in the Netherlands**

Henk Hilderink<sup>1</sup>, <sup>1</sup>*RIVM, Bilthoven, The Netherlands*

The National Institute for public health and the environment (RIVM) used a scenario methodology in their latest Public Health Status and Foresight report (PHSF2014) to explore a broad range of health impacts. This approach resulted in a systematic description of future trends in the key drivers and determinants, and their impact on health, including disease burden and health expenditures. In addition, an intensive stakeholder process was organized to identify the main societal and policy challenges, which resulted in four 'perspectives' on health. The four perspectives make explicit the diversity in visions that exists on the notions of health and care.

## Hospitals

067 **From Paper to Practice: Implementation of guidelines for mental health screening in pregnancy with women of refugee background**

Jacqueline Boyle<sup>1,2</sup>, Nishani Nithianandan<sup>1</sup>, Chris East<sup>2</sup>, Jacquie McBride<sup>3</sup>, Melanie Gibson-Helm<sup>1</sup>

<sup>1</sup>*Monash Centre for Health Research and Implementation, Monash University, Melbourne, Victoria, Australia*, <sup>2</sup>*Monash Womens, Monash Health, Melbourne, Victoria, Australia*, <sup>3</sup>*Monash Health Refugee and Wellbeing Service, Melbourne, Victoria, Australia*

Background: Mental health screening in pregnancy is recommended but not routine. Refugee women are at high-risk of mental illness.

Hypotheses: Appropriately implemented mental health screening in pregnancy can increase the diagnosis and management of mental illness in refugee women.

Methods: Mixed methods identifying needs of women and health services to inform mental health screening in pregnancy care. Recommendations were formed by mapping behavioural determinants to behaviour change techniques.

Results: Participants wanted an inter-disciplinary approach, coordinated care, translated materials, normalisation of screening and communicated benefits.

Conclusion: The findings inform appropriate and sustainable implementation of perinatal mental health screening for refugee women.

096

### **System wide priority guidelines**

Lise Lund Håheim<sup>1</sup>, Anne Karin Lindahl<sup>1</sup>, <sup>1</sup>*Norwegian Knowledge Centre for the Health Service, Oslo, Norway*

Theory. Priority guidelines for elective treatment were introduced in 2008-2010 in Norwegian hospitals covering 32 medical fields and 398 conditions.

Methods and hypotheses. Analyses for the period 2008-2012 included interrupted time series for effect of intervention, ANOVA-analyses to assess differences across health regions before and after introduction, and Chi-square tests for reduction in excess waiting time.

Results. Reduction in waiting time was achieved although differences remained. Compliance was observed for two guidelines, 21 partial compliance, and six no compliance.

Conclusion. The effect varied across medical fields and health regions although compliance improved in the period.

161

### **Why patients don't pitch: Understanding non-attendance in an outpatient department in an urban referral hospital in South Africa.**

Lucy Frost<sup>1,2</sup>, Benjamin Emmink<sup>2</sup>, <sup>1</sup>*Thames Valley and Wessex Leadership Academy, Winchester, UK*, <sup>2</sup>*George Hospital, George, Western Cape, South Africa*

Access to medical services when needed is fundamental to health, though not always easy to provide. A mixed-methods project was undertaken at George Regional Hospital, South Africa, aiming to understand non-attendance rates of up to 40%. Through telephone interviews with patients who had missed appointments, surveys with those that attended, and multivariate logistic regression analysis of attendance data, a holistic picture could be built. Potentially reversible factors were isolated, including patients not knowing of appointments, high phone number turnover, and difficulties in cancelling appointments. With deeper understanding, interventions can be targeted to improve accessibility, and to minimise non-attendance rates.

306

### **A comparison of intentional and unintentional injuries in Nigeria**

Laura Cassidy<sup>1</sup>, Oluwole Olaomi<sup>2</sup>, Emmanuel Ameh<sup>0</sup>, <sup>1</sup>*Medical College of Wisconsin, Milwaukee, WI, USA*, <sup>2</sup>*National Hospital, Abuja, Nigeria*

**Theory/Methods:** Novel trauma registry data were analyzed to characterize differences between intentional and unintentional injuries in two Nigerian hospitals.

**Results:** Of the 547 patients, 107 (19.6%) suffered an intentional injury. The majority was over 30 years old and suffered penetrating injuries. Most common severe injuries were to the face, thorax, or soft tissue. They were less likely to receive an x-ray or CT scan, more likely to receive a transfusion, chest surgery, abdominal surgery or extremity surgery.

**Conclusions:** Results will identify opportunities for prevention and treatment of intentional injuries that result in high resource utilization and low hospital mortality.

## Care and General Practice

### 066 Engaging stakeholders in identifying priority evidence-practice gaps and strategies for improvement in pregnancy care

Melanie Gibson-Helm<sup>1</sup>, Jodie Bailie<sup>2</sup>, Veronica Matthews<sup>2</sup>, Alison Laycock<sup>2</sup>, Jacqueline Boyle<sup>1</sup>, Ross Bailie<sup>2</sup>, <sup>1</sup>*Monash Centre for Health Research and Implementation, School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia*, <sup>2</sup>*Menzies School of Health Research, Charles Darwin University, Brisbane, Australia*

**Theory/framework:** System-wide stakeholders used continuous quality improvement (CQI) data to identify evidence-practice gaps for improvement in primary health provision of pregnancy care across Australia.

**Methods:** Two phases of reporting and feedback using aggregate CQI data.

**Results:** Phase one- 1091 pregnancy records were audited and 58 systems assessments conducted at 65 primary health centres (2012-2014). Stakeholders (n=192) identified eight priority areas for improvement including cigarette and alcohol use and psychosocial wellbeing. Phase two will identify barriers, enablers and system-wide improvement strategies.

**Conclusions:** Stakeholders prioritised key areas of pregnancy care where evidence-practice gaps exist, allowing co-development of participatory, action-research to improve outcomes.

### 154 Linking Electronic Medical Records with Administrative Data: Diabetic Control and Hospital and Emergency Room utilization using data from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) and the Institute for Clinical Evaluative Sciences (ICES)

Richard Birtwhistle<sup>1,3</sup>, Michael Green<sup>1,3</sup>, Rick Glazier<sup>3,2</sup>, Eliot Frymire<sup>1</sup>, Simone Dahrouge<sup>4,1</sup>, Michelle Greiver<sup>2</sup>, David Barber<sup>1</sup>, Amanda Terry<sup>5</sup>, <sup>1</sup>*Queen's University, Kingston, Canada*, <sup>2</sup>*University of Toronto, Toronto, Canada*, <sup>3</sup>*Institute of Clinical Evaluative Sciences, Toronto, Canada*, <sup>4</sup>*University of Ottawa, Ottawa, Canada*, <sup>5</sup>*Western University, London, Canada*

This study linked EMR data from the CPCSSN and hospital and emergency room data from ICES in Ontario Canada. Objective: Demonstrate successful data linkage and assess patients' levels of Hemoglobin A1C (HbA1c) and hospital and emergency room utilization. This Observational study had a look back period from

2008-2012. The study sample included 12,358 patients with a CPCSSN diagnosis of diabetes. The analysis was done comparing HbA1C levels (<7, 7.0-8.0, >8) to number of hospital and emergency room visits and admission diagnoses. Results: The linkage rates was >98%. Patients with an HBA1c > 8 had more frequently hospitalizations and ER use.

246

### **Altered eating: a definition and framework for assessment and intervention**

Duika Burges Watson<sup>1</sup>, Sue Lewis<sup>1</sup>, Val Bryant<sup>1</sup>, Jo Patterson<sup>2</sup>, Charles Kelly<sup>3</sup>, Rachel Edwards-Stuart<sup>4</sup>, Madeleine Murtagh<sup>5</sup>, Vincent Deary<sup>6</sup>, <sup>1</sup>*Durham University, Stockton on Tees, UK*, <sup>2</sup>*City Hospitals Sunderland NHS Foundation Trust, Sunderland, UK*, <sup>3</sup>*Freeman Hospital Northern Centre for Cancer Care, Newcastle Upon Tyne, UK*, <sup>4</sup>*Independent food and flavour consultant, London, UK*, <sup>5</sup>*Bristol University, Bristol, UK*, <sup>6</sup>*Northumbria University, Newcastle Upon Tyne, UK*

Many individuals live with long term challenges around food and eating. We have developed a new definition of altered eating and framework for its assessment and management. Altered eating refers to a changed state of any combination of physical, emotional and social interactions with food and eating that has a negative impact on health and wellbeing. The framework provides a patient-centred, holistic review of physical and emotional wellbeing that can help to assess and intervene in patients' food related quality of life.

153

### **Patient perceptions of access to care and utilization of external primary health care (PHC) services and emergency departments.**

Michael Green<sup>1,2</sup>, Tara Kiran<sup>2,3</sup>, Alexander Kopp<sup>2</sup>, Shahriar Khan<sup>1,2</sup>, Eliot Frymire<sup>1,2</sup>, Richard Glazier<sup>2,3</sup>, <sup>1</sup>*Queen's University, Kingston, Ontario, Canada*, <sup>2</sup>*Institute for Clinical Evaluative Sciences, Toronto, Ontario, Canada*, <sup>3</sup>*University of Toronto, Toronto, Ontario, Canada*

Background: Access to care when sick on the same or next day is one commonly reported measure used to compare health system performance internationally. Canada consistently performs poorly in these comparisons. There is however very limited data on the relationship between this measure and healthcare utilization.

Hypothesis: Better access to primary healthcare as determined by patient reported access to care when sick will be associated with decreased utilization of external PHC and ER services. Methods: Linked patient survey and healthcare administrative data will be used to assess this relationship. Results are pending and will be available prior to the meeting.

## Inequalities

049

### **Gender Differences in Self-Reported Health in Ukrainian Working-age Population: Evidence from the European Social Survey**

Iryna Mazhak<sup>1</sup>, <sup>1</sup>*AIAS, Aarhus, Denmark*

Gender is a one of the most important social determinants of health inequality. Ukrainian life expectancy gender gap is almost ten years in favor of women. Data from the 2 - 6 rounds (N=5158) of a European Social Survey are used to show gender differences in self-reported health (IBM SPSS 22). It was assumed that women reported poorer health status compared with men despite of longevity. Women estimate their health significantly lower than men do (OR 1.83; 95% CI 1.65,

2.04). For both genders, age and feeling about household's income nowadays were associated with increased odds for poor self-reported health.

**082 Research investments follow historical ties but are some countries being neglected?**

Michael Head<sup>1</sup>, Joseph Fitchett<sup>2</sup>, Rebecca Brown<sup>1</sup>, Stuart Clarke<sup>1</sup>, Rifat Atun<sup>2</sup>,  
<sup>1</sup>*University of Southampton, Southampton, Hampshire, UK*, <sup>2</sup>*Harvard University, Boston, Massachusetts, USA*

The Research Investments in Global Health study (ResIn, [www.researchinvestments.org](http://www.researchinvestments.org)) has systematically described investments from public and philanthropic funders for infectious disease research awarded to UK institutions 1997-2013 (total £3.7 billion). Within the global health research portfolio, 9 out of the top 10 countries (in terms of sum investment) were in Africa (the exception being India) and 8 out of the top 10 have colonial ties to the UK. ResIn has ongoing analyses to similarly assess other G20 country investments. It is likely that some low-income countries are in great need of, but do not significantly benefit from, research investment.

**095 Well Communities**

Gail Findlay<sup>1</sup>, Patrick Tobi<sup>1</sup>, <sup>1</sup>*University of East London, London, UK*

Despite the long history of community development in health, the evidence base for such 'asset based' approaches is limited and has held back long term, mainstream investment. Over 8 years IHHD has led a unique research and development programme, described in this paper, which has designed, tested and refined the *Well Communities* approach, working with 33 disadvantaged neighbourhoods across London. This has made important contributions to the evidence and business case for longterm investment in *Well Communities* as an effective, scalable framework for communities and local organisations to work together to improve health and wellbeing, build resilience and reduce inequalities.

**059 Do Healthcare Systems Discriminate? A Comparative Policy Analysis of Health Inequality in the United States and United Kingdom**

Sarah Rudasill<sup>1</sup>, <sup>1</sup>*Wake Forest University, Winston-Salem, NC, USA*

This comparative analysis of the U.S. and U.K. healthcare systems pinpoints inequalities in health outcomes and recommends policies to alleviate disparities. Mortality data from the CDC'S WONDER Database and Cancer Research U.K. was utilized to analyze breast and prostate cancers for incidence and mortality rates and ratios by race. The data indicates that although the United States outperforms the United Kingdom in overall mortality rates, outcomes for U.S. black residents are significantly worse than those for U.K. black residents. Potential sources of greater inequality are discussed, with special focus on the structural differences yielding better minority outcomes in the U.K.

## Organisational Management Theory

**271 Systems and Organizations, A Multi-Methodological Review**

Stephen Shervais<sup>1</sup>, <sup>1</sup>*Eastern Washington University, Cheney, WA, USA*

Theory/framework: Drawing on Checkland and Linstone, and others, we create a framework for initiating organizational change.

Methods and hypothesis: We start from two guideposts: organizational problems are rarely due to single factors, and this can make such problems difficult to identify and bound.

Results: As with cancer-fighting drugs, a cocktail of methodologies may produce better results than one organizational theory.

Conclusions: A general systems approach, employing different techniques at different points in the analysis, can give a better basis for action than can a simple one-size-fits-all methodology

## 282 **The limitations inherent in using "benchmark" outcomes to estimate NHS health service safety**

Jennifer Spencer<sup>1</sup>, Terry Dickerson<sup>1</sup>, <sup>1</sup>*University of Cambridge, Cambridge, UK*

Theory/Framework

Epidemiological Association study

Methodology and hypothesis

We extracted UK self harm and general mental health mortality data from the WHO mortality database to determine whether the country's suicide rate satisfied as a good "benchmark" outcome measure for the efficiency and safety of UK mental health services.

Results

The overall mortality rate increased 4-5-fold from 1990-2010, whilst the suicide rate was unchanged. The UK suicide rate does not act as a good benchmark outcome measure.

Conclusion

Relying on a single universal outcome measure may not provide managers with enough information about the safety and efficacy of their service.

## 274 **Expanded Charging of Overseas Patients: Does it measure up to the Government's promises?**

Sarah Steele<sup>1,2</sup>, Ruth Atkinson<sup>1</sup>, <sup>1</sup>*Queen Mary University of London, London, UK*,  
<sup>2</sup>*Cambridge Centre for Applied Research into Human Trafficking, Cambridge, UK*

In 2014, the UK Government claimed £500m could be recouped through expanded charging of overseas NHS patients, while promoting fairness and protecting vulnerable persons. We collate data from FOIs to determine how much NHS trusts are: (1) billing; (2) recovering; and (3) spending on recovering. We identify inconsistencies in recouping funds, and detail issues with allocating appropriate staff. We note that the absence of dedicated teams opens the prospect of untrained staff improperly applying provisions, confirming incidents reported in the media. We recommend proposals to further expand charging should be revised immediately in the face of concerns.

267

**The importance of including frontline staff safety assessments in the Healthcare system design process**

Jennifer Spencer<sup>1</sup>, Terry Dickerson<sup>1</sup>, <sup>1</sup>*University of Cambridge, Cambridge, UK*

Theory: Design Research Methodology

Hypothesis and methodology: We explored how culture affects safety awareness at different hierarchical levels within an NHS mental health trust, using a prospective hazards analysis toolkit, a quality assurance feedback form and a safety culture assessment tool.

Results: Managers and staff believed the organisation's culture to be bureaucratic, with individual teams more proactive than the general organisation. Only frontline staff were aware of safety concerns being addressed within the confines of the frontline staff communication network.

Conclusion: Assessment of frontline staff safety viewpoint is essential to good change management as part of the system design process.

## Sessions Starting Wednesday 10:50

### Public Health

290

**Developing Community-Based Health Programs in a Low-Resource Urban Setting**

Erwin William Leyva<sup>1</sup>, <sup>1</sup>*University of the Philippines, Manila, Philippines, Malaysia*

The primary health care approach has been the guiding framework in community empowerment and capacity building activities of the University of the Philippines College of Nursing. The purpose of this action research is to develop a community-based health program in a low resource setting. A survey on 1,700 respondents was conducted to identify needs which was substantiated with review of records, focus group discussions and key informant interviews of major stakeholders in the community. Partnerships were formed to determine program strategies that address the prevention and control of hypertension vis-a-vis existing human and material resources.

224

**Barriers to universal immunisation in Villa Maria Hospital, Uganda; A mixed methods analysis.**

Daniel Yeomans<sup>1,2</sup>, Amy Hawkins<sup>1</sup>, <sup>1</sup>*University Of Bristol, Bristol, UK*,  
<sup>2</sup>*Buckinghamshire Healthcare Trust, Aylesbury, UK*

The aim of this study was to identify barriers to universal child immunisation in Uganda and suggest ways in which these can be minimised. Currently, 40% of the Ugandan population complete their vaccination schedule<sup>7</sup>.

Data collection was completed at Villa Maria Hospital, a private not-for-profit hospital. Semi-structured interviews were conducted with individual women attending on-site and outreach immunisation clinics over the period 7th – 18th July 2014. Overall, 15 interviews were conducted with women aged from 21-32 years. The most commonly cited barriers to immunisation were; fear of side effects, long distance from clinic and traditional beliefs.

138

**Current and future trends in the epidemiology of cancer in Denmark**

Anders Green<sup>1</sup>, Peter Bjødstrup Jensen<sup>1</sup>, <sup>1</sup>*OPEN, Odense University Hospital, Odense, Denmark*

We have linked nationwide register data on cancer, hospital activities and civil service to investigate incidence, mortality, treatment patterns and prevalence of selected solid cancer forms in Denmark for the period 2000 through 2011. In a 'stock-and-flow' model for each cancer form we estimated relevant transition rates, stratified for gender and age. Under specified assumptions, the models were projected annually to provide scenarios for future trends in the key epidemiological indicators through the year 2030.

Cancer forms differ in epidemiological profiles and future trends. Our approach may support optimised dimensioning and prioritisation of current and future cancer care.

**214 Toxic Elements in Najranian tobacco (Shemma) and Cytological Changes in Oral Mucosa**

Eid Brima<sup>1</sup>, <sup>1</sup>*Khing khalid university, Abha, Saudi Arabia*

BACKGROUND: Local smokeless tobacco (shemma) from Najran city, in Saudi Arabia is considered to cause health problems.

METHOD: Shemma samples were collected from Najran city. A questionnaire was used to collect more information about users and shemma types. Toxic elements were analyzed by using ICP-MS. Papanicolaou test was used to detect the cytological changes induced by shemma.

RESULTS: The concentrations of toxic elements were associated with shemma type. The cytological changes in oral mucosa of shemma users were revealed.

**232 The Impact of Health Service Utilization on the Practice of Appropriate Case Management during childhood diarrhoea: Evidence from Nepal Demographic and Health Survey (DHS), 2001-2011**

Pramesh Ghimire<sup>1</sup>, Kingsley Agho<sup>1</sup>, Andre Renzaho<sup>1</sup>, Camille Raynes-Greenow<sup>2</sup>, <sup>1</sup>*Western Sydney University, Sydney, NSW, Australia*, <sup>2</sup>*Sydney University, Sydney, NSW, Australia*

**Background**

This study investigated the effect of health service utilization on the practice of ORS, extra fluids and continuous feeding during diarrhoea among under-fives children

**Methods**

Pooled 2001, 2006 and 2011 DHS data sets were examined using multivariate logistic regression after adjusted for potential confounders.

**Results**

Our results revealed that utilization of health service during childhood diarrhoea increased the odds of using ORS, offering extra fluids and practicing continuous feeding significantly by 83%, 41% and 53%, respectively.

**Conclusions**

Utilization of health services increases use of ORS, extra fluids and continuous feeding practice during diarrheal episodes in Nepalese children.

094

**The Community REACH study: A cluster randomised controlled trial of a community-based intervention to increase early uptake of antenatal care (ANC)**

Lorna Sweeney<sup>1</sup>, Mary Sawtell<sup>2</sup>, Cathryn Salisbury<sup>1</sup>, Meg Wiggins<sup>2</sup>, Angela Harden<sup>1</sup>, <sup>1</sup>*Institute for Health and Human Development, University of East London, Water Lane, London E15 4LZ, UK*, <sup>2</sup>*Social Science Research Unit, UCL Institute of Education, University College London, 18 Woburn Square, London, WC1H 0NR, UK*

This paper describes the design, development, and implementation of a cluster RCT to examine the effectiveness of a community-based intervention aimed at increasing early uptake of ANC for women living in North and East London and south Essex. The intervention aims to raise awareness of the value of early uptake of ANC in pregnancy and to support women in how to access appropriate care. A co-design process was used to engage local communities to tailor the content and form of the intervention, and to facilitate communication of the intervention through community self-help and social support.

## Social Determinants and Patient Reported Outcome Measures

301

**Looking upstream: Assessing the social and physical determinants of circumpolar population health.**

Ryan Ray<sup>1,2</sup>, David Driscoll<sup>1,2</sup>, <sup>1</sup>*Institute for Circumpolar Health Studies, Anchorage, Alaska, USA*, <sup>2</sup>*University of Alaska-Anchorage, Anchorage, Alaska, USA*

### **Theory/Framework**

Systematic reviews of health determinants inform policies intended to mitigate adverse health outcomes. The study applied Dahlgren and Whitehead's (1991) socioecological model of health determinants to identify social and/or physical determinants of health in the Circumpolar North.

### **Methods**

The meta-analysis conducted a systematic review of 65,003 studies related to leading causes of mortality in the Circumpolar North. Manuscripts selected for inclusion represent peer-reviewed, original research published in English from 2012-present that displayed a rigorous causal relationship between a health determinant and selected health outcomes.

### **Results/Conclusions**

The study identified ten primary health determinants, associated health outcomes, and related policy recommendations.

268

**From optimum standards to optimal infection control practice: An approach to healthcare improvement that takes the practical realities of *in situ* infection risk as its point of departure**

Rick Iedema<sup>1</sup>, Mary Wyer<sup>2</sup>, Suyin Hor<sup>2</sup>, Lyn Gilbert<sup>3</sup>, Christine Jorm<sup>3</sup>, Claire Hooker<sup>3</sup>, Matthew O'Sullivan<sup>3</sup>, <sup>1</sup>*Monash University, Melbourne, Victoria, Australia*, <sup>2</sup>*University of Tasmania, Hobart, Tasmania, Australia*, <sup>3</sup>*University of Sydney, Sydney, Australia, Australia*

This presentation reports on an Australian National Health & Medical Research Council funded project which focuses on strengthening frontline clinicians' infection control. Conceptualised as an application of workplace based learning theory, the project involves frontline clinicians and patients in interviews and

video feedback sessions to discuss *in situ* infection control practices. The paper proceeds to frame this approach to enabling and investigating clinician/patient learning as counterbalancing prevailing health service improvement research and training that privileges optimum standards for everyone everywhere at the expense of understanding and learning from what are optimal strategies for us in the here and now.

200 **Community engagement and co-design approaches to promote early initiation of antenatal care: An in-depth qualitative exploration of participant involvement and perceived impact.**

Cathryn Salisbury<sup>1</sup>, *<sup>1</sup>University of East London, London, UK*

An in-depth qualitative study using observations and semi-structured interviews to explore the experiences of community members participating in an innovative co-design process to develop and deliver a community-centred intervention to improve early uptake and access to antenatal services among disadvantaged groups of women. Co-design is a collaborative design process focusing on increasing engagement and empowerment of community members to develop local solutions. The study will examine the perceived acceptability and benefits of the intervention for local communities; using these findings to help explain the impact of the co-designed intervention on women's uptake of antenatal care and subsequent health outcomes.

## Acute Care and Dentistry

027 **Volunteer-led Free Dental Outreach Clinics in semi-urban Uganda: a feasibility study**

David Lawrence<sup>1,2</sup>, Rebecca Barr<sup>2</sup>, Enoch Magala<sup>2,1</sup>*<sup>1</sup>Brighton and Sussex University Hospital NHS Trust, Brighton, UK, <sup>2</sup>The Centre for Youth Driven Development Initiatives, Ndazabazadde, Uganda*

Theory: Globally, dental disease causes significant socio-economic costs. The debate about the role of dental aid organisations continues.

Methods: We launched a dental clinic at the premises of a non-governmental organization which offered education, assessment, and treatment.

Results: We ran three clinics. 86% of patients presented in pain, 43% underwent extraction/s, 7% declined extraction and 26% required restorations. The cost was £1.82 per patient or £0.95 per Unit of Dental Activity.

Conclusions: We demonstrated a need for dental healthcare, service acceptability, and potential to sustainably provide a Basic Package of Oral Care. Ongoing debate surrounding dental aid organisations is needed.

226 **Developing an early warning score for surgical patients in a Zambian hospital**

Francis Bonomaully<sup>1,3</sup>, Matthew Bonomaully<sup>2,3</sup>, Devendra Mahtani<sup>3,1</sup>*<sup>1</sup>Western Sussex Hospitals NHS Foundation Trust, West Sussex, UK, <sup>2</sup>Dartford and Gravesham NHS Trust, Dartford, UK, <sup>3</sup>GSTT-Ndola Partnership, Guy's and St Thomas' NHS Foundation Trust, London, UK*

Early warning scores (EWS) to identify unwell patients developed in high income settings may not be applicable in low-resource settings due to differing epidemiology and health systems.

### Methods

This retrospective, case-control study of surgical inpatient wards at Ndola Central Hospital, Zambia was conducted over 3 months. Physiological observations and demographic data were collected for cases (deaths, n=43) and controls (discharges, n=149)

### Results

A scoring system was developed with five variables as predictors of death within 48 hours (AUROC 0.774, 95% CI 0.68-0.87).

### Conclusions

A novel scoring system is proposed requiring no additional equipment and minimal changes to current working practices.

038

### An assessment of the compliance of systematic review articles published in craniofacial surgery with the PRISMA statement guidelines: A systematic review

Thomas Pidgeon<sup>1,7</sup>, Georgina Wellstead<sup>2,7</sup>, Harkiran Sagoo<sup>3,7</sup>, Daniyal Jafree<sup>4,7</sup>, Alexander Fowler<sup>5,7</sup>, Riaz Agha<sup>6,7</sup>, <sup>1</sup>*St. Andrews Centre for Plastic Surgery and Burns, Broomfield Hospital, Essex, UK*, <sup>2</sup>*Barts and the London School of Medicine and Dentistry, QMUL, London, UK*, <sup>3</sup>*Guy's, King's and St. Thomas' School of Medical Education, King's College London, London, UK*, <sup>4</sup>*University College London Medical School, London, UK*, <sup>5</sup>*Guy's and St. Thomas' NHS Foundation Trust, London, UK*, <sup>6</sup>*Guy's and St. Thomas' NHS Foundation Trust and Doctoral Candidate at Balliol College, University of Oxford, London, UK*, <sup>7</sup>*The Academic Surgical Collaborative, London, UK*

All systematic review articles published in the three top craniofacial journals from 1<sup>st</sup> May 2010 to 30<sup>th</sup> April 2015 were examined for: author; year; journal; the pathology and interventions examined; and compliance of each review article with the PRISMA checklist.

Data was extracted from 62 articles. Areas of poorest compliance included the declaration of a study protocol (19.4%) and the declaration of funding (37.1%). All studies described the rationale for the review, declared the results of any additional analyses, and provided a summary.

Compliance of secondary research within craniofacial surgery with areas of the PRISMA checklist could be improved.

## Health Policy and Systems

308

### Capabilities and Health

Paul Anand<sup>1,2,3</sup>, <sup>1</sup>*Open University, Milton Keynes, UK*, <sup>2</sup>*Oxford University, Oxford, UK*, <sup>3</sup>*King's College, London, UK*

The paper provides an overview of work from the capability measurement project relevant to the understanding of health and wellbeing.

180

### **The Hole in my Pants Was Made by Out-of-Pocket: Healthcare Utilization and Expenditure Among Suburban Residents In Kuala Lumpur, Malaysia**

Murallitharan Munisamy<sup>1,2</sup>, Alessio Panza<sup>1</sup>, Sathirakorn Pongpanich<sup>1</sup>, Masamine Jimba<sup>4</sup>, <sup>1</sup>*College of Public Health Sciences Chulalongkorn University, Bangkok, Thailand,* <sup>2</sup>*London School of Economics and Political Science, London, UK,* <sup>3</sup>*London School of Hygiene and Tropical Medicine, London, UK,* <sup>4</sup>*Department of Community and Global Health University of Tokyo, Tokyo, Japan*

This paper describes the healthcare utilisation and expenditure among suburban residents in Kuala Lumpur, Malaysia as part of an experimental Health Microinsurance Scheme (HMI). Selected households followed up at 2 private primary care (PPC) clinics were surveyed with questions focusing on health-seeking behaviour and monthly health expenditure; while corresponding data from the PPC was obtained on patients' clinical conditions. Findings show 17-24% of total monthly expenditure was in healthcare among lower-income households with children or chronic disease patients, mainly Out-Of-Pocket (OOP). Delays in seeking healthcare services were due to economic constraints and associated with poorer outcomes.

263

### **Assessing the impact of cross-border healthcare**

Katarzyna Byszek<sup>1</sup>, <sup>1</sup>*Warsaw School of Economics, Warsaw, Poland*

The author presents the costs and benefits of cross-border healthcare introduced by Directive 2011/24/EU. The analysis is focused on comparing approaches and methods that were used by the European Commission and the Polish Ministry of Health in their Impact Assessments (IAs) with regard to: the diagnosis of the problem, identification of stakeholders, analysis of options, and the scope of cost-benefit analyses, particularly in the public finance sector. The author concludes by examining the similarities and differences between the IAs, both of which aim to provide evidence and transparency on the benefits and costs of policy.

## Organisational Management Theory

279

### **Can sharing positive images improve the emotional attachment between dementia patients and their carers?**

Wei-Ying Chou<sup>1</sup>, Christine Waszynski<sup>2</sup>, John Clarkson<sup>1</sup>, <sup>1</sup>*University of Cambridge, Cambridge, UK,* <sup>2</sup>*Hartford Hospital, Connecticut, USA*

Theory/Framework

Evidence-based medicine framework; Small nonrandomised controlled trial

Methodology and hypothesis

A positive emotional attachment between dementia patients and carers can reduce carer burden and patient agitation. We tested a "one minute picture sharing activity" (OPSA) to help carers and dementia patients share daily positive experiences. Participants were assigned to intervention or control groups. Intervention group carers showed OPSA pictures to patients and conversed with them.

Results

After one week, only the intervention group's "mutuality score" had significantly improved.

Conclusion

These promising results suggest OPSA could foster good relations.

**285**      **How to define a Starting Point for a Project that meets Customer Need - Description of a New Methodology**

Amanda Goodger<sup>1</sup>, <sup>1</sup>*University of Cambridge, Cambridge, Cambridgeshire, UK*

Theory/Framework: Action Research within a Case Study Mechanism

Hypothesis/Objective: We devised an alternative approach for all elements of Customer 'Need' into a Project's definition, using all available information.

Methods and Results: We studied 12 organisations with different commercial orientations and developed a generic method for defining a project's starting point. We then utilised the new method to develop a cyber-based healthcare module including appropriate cybersecurity within a citizen education programme to good effect.

Conclusion: The Methodology identifies the 'Sweet Spot' that satisfies the needs of all stakeholders when defining project goals.

## Sessions Starting Wednesday 14:00

### Social Science and Medicine

**229**      **I am a completely and absolutely different person: identity and health in young Venezuelan undergraduate students of a private university in Colombia**

Mariana Sanchez<sup>1</sup>, Laura Fonseca<sup>1</sup>, <sup>1</sup>*Universidad de La Sabana, Chia, Cundinamarca, Colombia*

Framework: Enabling social spaces is a strategy to promote dialogue between people in order to critically reflect upon complex issues such as migration due to sociopolitical reasons.

Methods: Photovoice as a tool that allows creating enabling spaces and promotes dialogue between ten Venezuelan undergraduate students in a Colombian university.

Hypotheses: The process of migration has an impact on the reconstruction of identity and in turn over health-related behaviours of participants.

Result & Conclusions: The process of identity reconstruction and new health-related behaviours is directly linked with the migratory status as well as the new role as undergraduate students.

**242**      **What knowledge and beliefs do patients hold in relation to familial breast cancer?**

Mavis Machirori<sup>1</sup>, Alison Metcalfe<sup>1</sup>, Christine Patch<sup>1</sup>, <sup>1</sup>*King's College London, London, UK*

Health inequalities in cancer continue to widen across ethnicities. Health providers and patients sometimes disagree on the biological and social meaning and impact of genetic diseases. Successful health interventions are based on culturally appropriate information. This PhD work in progress will use interviews in a grounded theory approach to explore beliefs and knowledge held by BME men and women in relation to familial breast cancer syndromes. Results will

identify ways of improving current services to encourage wider participation in cancer services and improve health outcomes.

**092 Mapping the Health and Violence Nexus Using Spatial Video Geonarratives: Examples from Akron, Ohio and Skid Row in Los Angeles, California**

Andrew Curtis<sup>1</sup>, Jacqueline Curtis<sup>1</sup>, Eric Jefferis<sup>2</sup>, Chaz Felix<sup>2</sup>, Lauren Porter<sup>3</sup>, Peter Kerndt<sup>2</sup>

<sup>1</sup>*Kent State University, Kent, Ohio, USA*, <sup>2</sup>*Los Angeles County Department of Public Health, Los Angeles, CA, USA*, <sup>3</sup>*University of Maryland, University Park,, USA*

The geographic analysis of the health and violence nexus, including prostitution, the homeless, drugs, the built environment and disease presents a challenging data situation. Spatial video geonarratives (SVG) provides a solution that can capture ephemeral fine scale data from multiple "experts" whose insights can be used to describe the context and importance of buildings, streets, corners, and the perceived impact of different interventions. SVG from the community, police, ex-offenders, sex workers, health professionals, and the homeless in Akron, Ohio, and Skid Row in Los Angeles, California will be mapped to reveal micro-space complexity, and suggested policy modifications.

## Health Policy and Systems

**286 New Ideas, better practices: Creating and sustaining health care innovations**

Lorella Palazzo<sup>1</sup>, <sup>1</sup>*Group Health Research Institute, Seattle, WA, USA*

Health care systems grapple with generating, testing, and implementing timely and sustainable improvements to patient care. In the US, an integrated health care system piloted and evaluated over 40 innovations for deployment by clinical teams. At least 10 were incorporated into practice, 15 identified for further development or application. Our analysis shows that championship by established leaders, team capacity and collaborative engagement, and processes to communicate and institutionalize new learnings were key to embedding innovations into routine care. An organizational sociology framework can provide a template for other health care organizations to compare, contrast, and learn from their innovation efforts.

**044 Estimating the risk of future emergency department (ED) visit due to asthma exacerbation during a doctor consult in a primary care setting**

Chun Wei Yap<sup>1</sup>, Phui-Nah Chong<sup>1</sup>, Bee Hoon Heng<sup>1</sup>, <sup>1</sup>*National Healthcare Group, Singapore, Singapore*

This project aims to develop a model to risk stratify asthma patients during a doctor consult in a primary care setting so that appropriate interventions could be given to prevent future ED visits.

109086 and 22859 doctor consults from 2008-2011 and 2012-2014 were used to develop and validate a Cox regression model, respectively.

Age, ethnicity, hypertension, COPD, history of healthcare utilization, tracheostomy and relievers usage were found to be significant predictors. The model can risk-stratify patients into 3 groups, those likely to have ED visit within 2 or 16 months from current consult, and those unlikely to have ED visit.

**081 The ELIAS Performance Management Framework**

David Persaud<sup>1</sup>, <sup>1</sup>*Dalhousie University, Halifax, Nova Scotia, Canada*

**Theory/Framework** - This is a data driven performance management framework that is based on a cyclical five step process of measurement, disconfirmation, contextualization, implementation, and routinization which results in the enhancement of learning, innovation, adaptation, and sustainability (ELIAS) within health care organizations.

**Methods** - An assessment of the health care literature related to the topics outlined was performed and the information integrated into the ELIAS framework.

**Results & Conclusions** - The ELIAS framework utilizes data already being collected for accountability and quality improvement purposes. Its utilization enhances health care organizations achieving adaptation and sustainability by design, rather than by chance.

## Ageing

056

### **Can Healthcare Assistant Training (CHAT) improve the relational care of older people? Recruitment to a pilot and feasibility cluster randomised controlled trial**

Jill Maben<sup>1</sup>, Clare Aldus<sup>2</sup>, Sophie Sarre<sup>1</sup>, Heather Wharrad<sup>3</sup>, Justine Schneider<sup>3</sup>, Elaine Argyle<sup>3</sup>, Antony Arthur<sup>2</sup>, <sup>1</sup>*King's College London, London, UK*, <sup>2</sup>*University of East Anglia, Norwich, UK*, <sup>3</sup>*University of Nottingham, Nottingham, UK*

Background: Few studies of training interventions for health staff observe outcomes beyond 'reaction', the first of Kirkpatrick's four-level evaluation model.

Methods: Pilot and feasibility study of a cluster randomised controlled trial of a training intervention for HCAs caring for older people.

Results: Recruitment (actual/target) was: HCAs at baseline 84.0% (72/84) and follow-up 51.9% (52/84); patients at baseline 50.0% (50/100) and follow-up 38.0% (38/100)

Conclusions: Wards caring for older people are challenging environments to recruit and conduct trials involving staff and patients. They require methods of recruitment and data collection that minimise burden without compromising ethics or science.

134

### **Project 'Sorrisos de Porta em Porta' (Smiles Door to Door)**

Vitor Neves<sup>1</sup>, Maria Llanes<sup>1</sup>, Ana Simões<sup>1</sup>, <sup>1</sup>*Mundo a Sorrir, NGO, Porto, Portugal*

Average life expectancy has increased, resulting in worldwide ageing. It becomes, therefore, important to study specifics of ageing so we can bring wellbeing and quality of life to this population.

Project "Sorrisos de Porta em Porta" aims to promote oral health habits among elders by conducting awareness-raising actions of oral health and conducting oral health screening for elders who find themselves within the scope of the Portuguese social security network.

The project concluded that there is a need to educate people regarding the importance of oral care and the problems that lack of oral health brings to health in general.

### Understanding organisational resilience in the Older Person's Unit: facilitating the patient discharge process.

Myanna Duncan<sup>1</sup>, Janet Anderson<sup>1</sup>, Jonathan Back<sup>1</sup>, Alastair Ross<sup>3</sup>, Peter Jaye<sup>2</sup>, Adrian Hopper<sup>2</sup>, Patricia Snell<sup>0</sup>, <sup>1</sup>*King's College London, London, UK*, <sup>2</sup>*Guy's & St. Thomas NHS Foundation Trust, London, UK*, <sup>3</sup>*The University of Glasgow, Glasgow, UK*

*Theory/framework:* Resilience Engineering: Safety II approach.

*Methods:* Ethnographic observations and interviews.

*Research question:* Why is timely patient discharge in the Older Person's Unit so challenging?

*Results:* Patient discharge is a complex, non-linear process requiring continual adjustment and adaptation in response to evolving patient needs. Coordinating mechanisms include Multi-Disciplinary Teams, information artefacts and case analysis. However, these processes lack transparency, are heavily reliant on nursing resources and may be disrupted by small disturbances.

*Conclusions:* A Resilience Engineering approach provides the insight to better understand the complexities of discharge and inform process improvements.

## Public Health

### Substance Abuse Among Out of School Youths in Motor Parks in Lagos State, Nigeria

Chimezie Oriiude<sup>1</sup>, Olukemi Odukoya<sup>1</sup>, Tolu Odugbemi<sup>1</sup>, <sup>1</sup>*College of Medicine of the University of Lagos, Lagos, Nigeria*

**Background:** Substance abuse is a growing contemporary problem and youths constitute a high risk group.

**Objectives:** To evaluate substance abuse among out of school youths in Lagos, Nigeria.

**Methods:** A descriptive cross-sectional study utilising quantitative data collection method and SPSS analysis.

**Results:** The study revealed that 33.4% of the respondents had poor knowledge regarding substance-related health risks. Prevalence of substance abuse was 53.1%. Factors significantly associated with substance abuse were: age, gender, religion, education and knowledge of substance-related health risks.

**Conclusion:** Prevalence of substance abuse was high with alcohol, tobacco and cannabis in that order been the most abused substances.

### Poor Knowledge Among Educated Adults Regarding Paracetamol; A Wakeup Call For Public Healthcare Practitioners

Maham Tariq<sup>1</sup>, <sup>1</sup>*Quaid-i-Azam University Islamabad, Islamabad, Pakistan*

Over the counter use of Paracetamol has drastically increased and its toxicity is the foremost cause of acute liver failure in the western world, but unfortunately

remains undocumented in Pakistan and so far no studies have tackled this issue at the national level. Interview administered questionnaires were used to collect data from 352 urban educated adults. The implications of our results for the public are grave and points to a gap in knowledge and lack of awareness and increased potential of hepatotoxicity and other adverse effects through misuse/overuse. These findings serves as a call for action for public healthcare practitioners.

106 **Susceptibility to cigarette smoking and associated factors among adolescents in Ilorin, North Central Nigeria: A school based cross-sectional study**

Oluwaseyi Babatunde<sup>1,2</sup>, Layi Babatunde<sup>1,2</sup>, Susan Oladeji<sup>1,2</sup>, <sup>1</sup>*Babcock University, Ilishan, Ogun, Nigeria*, <sup>2</sup>*Babcock University Teaching Hospital, Ilishan, Ogun, Nigeria*

This study assessed susceptibility to cigarette smoking among non-smoking in-school adolescents in North Central Nigeria. It was a descriptive cross-sectional study involving 2000 students selected using multi-stage sampling technique. Data was collected using self-administered questionnaire. Close to 15% of the respondents were susceptible to cigarette smoking. Most susceptible were those who previously experimented with cigarette smoking (67.4%), had parents who smoke (48.8%) and close friends smoking (50.7%). These, as well as knowledge of harmful effects of tobacco and engagement in vocational training were significantly associated with susceptibility. The findings underscore the need for school based smoking prevention programs.

## Health Economics

047 **Drivers of Productivity in NHS Hospitals - A Big Data Approach**

Peter Kawalek<sup>1</sup>, Reza Salehnejad<sup>1</sup>, Manhal Ali<sup>1</sup>, <sup>1</sup>*Alliance Manchester Business School, University of Manchester, Manchester, UK*

We adapt a recent theory of firm productivity from economics to study the drivers of productivity in NHS hospitals. Guided by the theory, we build a wide data set on a large set of potential determinants of hospital productivity including management practices, organizational and cultural characteristics and patient led features. We use modern machine learning techniques to identify key drivers of interactions amongst them. The results particularly point to the critical role of management practices and organizational design features as the primary drivers of hospital productivity, providing valuable policy insights.

155 **Are Cardiovascular Disease (CVD) Risk Assessment and Management Interventions Cost-Effective? A Systematic Review of Evidence in Real-World and Clinical Setting**

John Tayu Lee<sup>1,2</sup>, Yizhou Wan<sup>1</sup>, Kenny Lawson<sup>3</sup>, Azeem Majeed<sup>2</sup>, Steve Morris<sup>4</sup>, Michael Soljak<sup>2</sup>, Christopher Millett<sup>2</sup>, <sup>1</sup>*National University of Singapore, Singapore, Singapore*, <sup>2</sup>*Imperial College London, London, UK*, <sup>3</sup>*James Cook University, Cairns, Australia*, <sup>4</sup>*University College London, London, UK*

### **Objective**

This aim of this study was to conduct a systematic review to evaluate whether cardiovascular disease risk assessment and management programmes is cost-effective.

**Methods**

Relevant publications were identified via electronic medical and social science databases from inception to 31 Dec 2015.

**Results**

Results from trial based studies suggested that risk assessment programmes were not cost-effective. In contrast, economic evaluations based on observational and economic modelling studies are more likely to suggest interventions may be cost-effective compared to usual care.

**Conclusion**

There remains little robust cost-effectiveness evidence supporting the implementation of CVD risk assessment and management programmes.

# Poster Presentations

0011 **Needs of Breastfeeding Supported and Breastfeeding Experiences in a group of Prison mothers in Suphanburi Province Prison**

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The incarcerated women are a vulnerable group that health care providers should deepen their understanding of. This study aims to understand the needs to support and experiences of breastfeeding in a group of prison mothers. The mixed methods research was used. Two main themes emerged from the text. The two main themes are: The individual experience of the mother and the importance of the environment of breastfeeding, and they need more support for breastfeeding from health care providers and family. This information will be helpful in increasing the guidelines for the care of mothers and babies in prison, to be effective next.

0014 **Burden and Its Associated Factors in Family Caregivers of Elderly Cancer Patients: A Systematic Review**

Lixia Ge<sup>1,3</sup>, Siti Zubaidah Mordiffi<sup>2</sup>, Karis Cheng<sup>3</sup>, <sup>1</sup>*National Healthcare Group, Singapore, Singapore*, <sup>2</sup>*National University Hospital, Singapore, Singapore*, <sup>3</sup>*National University of Singapore, Singapore, Singapore*

**Background:** Understanding caregiver burden and its associated factors among family caregivers of elderly cancer patients is important for intervention research. **Methods:** A systematic search of seven databases was performed. The identified articles were screened for eligibility and assessed for quality. Relevant data were extracted. **Results:** 21 articles were included. Variables associated with higher burden: being female, at a younger age, married, with lower education level, employed, with emotional stress, patients with metastatic cancer or with more symptoms or limitations in physical function. **Conclusions:** This review covered both subjective and objective burdens. More studies using established measures could increase the availability of data for meta-analyses.

0015 **Factors predictive of pesticide usage behaviors among rural Thai farmers.**

Donnapa Hongthong<sup>1</sup>, Buaban Yana<sup>1</sup>, <sup>1</sup>*Boromarajonani College of Nursing, Phayao, Phayao, Thailand*

This study aimed to identify factors predictive of pesticide usage behaviors among 185 rural Thai farmers. Data were collected by face-to-face interviews. Multivariate linear regression analysis revealed four factors predictive of pesticide usage behaviors: pesticide knowledge, awareness, using pesticide by themselves, and cholinesterase test result ( $P < 0.05$ ). The model for pesticide usage behaviors showed 56.4% of the variance explained by the independent variables. Knowledge and awareness of pesticides were the significant predictors of safe pesticide usage. Hence, providing health education and raising farmers' awareness should be considered as important goals in the attempt to promote self-protective behaviors among farmers.

0016 **Effects of SKT meditation on the mental health of Thai female prisoners**

Pimpimon Wongchaiya<sup>1</sup>, Buaban Yana<sup>1</sup>, Somsri Sajjasakulratn<sup>1</sup>, Chalermpon Gajai<sup>1</sup>,  
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The SKT meditation is developed by Somporn Kanthardussadee Triamchaisri (SKT). It effectively assists those who have chronic illnesses and dying patients. This study examined effects of SKT meditation on the mental health of prisoners.

A one- group pretest-posttest design was applied to evaluate the effects of SKT meditation. Twenty female prisoners volunteered to participate in the study. Participants were offered a three- week SKT meditation program. The GHQ-12 and PHQ-9 were used to evaluate the outcomes.

Results showed significant reduction of the GHQ-12 and PHQ-9 scores ( $p < .01$ ). This finding suggests positive effects of SKT meditation on mental health.

**0043**      **Methods of developing nursing process healthcare indicators: A scoping review**

Sarah Xiao<sup>1</sup>, Ann Tourangeau<sup>1</sup>, Kim Widger<sup>1</sup>, Whitney Berta<sup>2</sup>, <sup>1</sup>*Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada*,  
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Identifying how nursing care directly affects patients is essential to improving care quality and determining nursing's contribution to organizational performance. This scoping review examined the literature on methods of developing nursing process indicators to evaluate the impact of nursing care on patient outcomes. Medline, Embase, CINAHL, and HealthStar databases were searched. From 11073 unique citations, 23 articles were selected. The most commonly reported development methods were focus groups (30%), Delphi technique (22%), and surveys (17%). Development of valid and reliable nursing process indicators using rigorous methods is a necessary first step toward improving management and evaluation of nursing care quality.

**0069**      **Impact of Lab Turnaround Times on Infectious Diseases Management**

Eliona Gkika<sup>1</sup>, Yannis Tselentis<sup>1</sup>, Anna Psaroulaki<sup>1</sup>, Ioannis Goniotakis<sup>1</sup>, Constantin Zopounidis<sup>2</sup>, Vassilis Moustakis<sup>2</sup>, Kitsos Gkikas<sup>3</sup>, Vassilis Kouikoglou<sup>2</sup>, <sup>1</sup>*University of Crete, School of Medicine, Heraklion, Crete, Greece*, <sup>2</sup>*Technical University of Crete, Chania, Crete, Greece*, <sup>3</sup>*Panarkadiko Hospital, Tripoli, Greece*

Laboratory turnaround times influence patient's hospitalization times and hospital running costs. This study reports on an analysis of timing data from 77,416 tested clinical specimens from patients who attended five public hospitals in Crete Island. We focused on hospitalized patients due to infectious diseases and assessed the impact of laboratory turnaround times on the length of hospitalization and the extent to which standby time periods influence the patients' treatment. It turns out that there is high correlation among delays, duration of hospitalization and medical care expenses, and margin for improving hospital treatment and cost cutting.

**0079**      **Data harmonizing: Thinking big and small about health and community**

Elise Murowchick<sup>1</sup>, <sup>1</sup>*Seattle University, Seattle WA, USA*

Data harmonization, a broad set of analytic techniques for combining datasets, is underutilized in health research. Remediating this we provide two dataset studies

to model overarching ideas with real world applications. The first study was an evaluation of an education intervention for health care workers and the second study models harmonizing a small longitudinal study of health and wellbeing in adolescents with a large nationally representative adolescent health study. Results were good harmonization in the first instance and in the second some information loss. Both studies provided illustrations to inform future work identifying and organizing principles for our field

**0093 Public health expenditure in Spain: Is there a partisan behaviour?**

Antonio Montanes<sup>1</sup>, Jesus Clemente<sup>1</sup>, Angelina Lazaro<sup>1</sup>, <sup>1</sup>*University of Zaragoza, Zaragoza, Spain*

This study examines the disparities in the evolution of the Spanish regional public health expenditures from 1991 to 2010. We obtain that the changes in the regional public health system have led the regions to reflect a very heterogeneous pattern of behaviour. These differences depend on economic and demographic factors, but also on the ideology of the regional governments. The greater the number of years that a region is governed by a right-wing party, the lower the public health expenditure. This result suggests the presence of a clear partisan behaviour in the Spanish public health system.

**0103 Distribution of type two diabetes risk factors in a developing country: validity of use of diabetic risk scores in the Solomon Islands**

Sarra Wang<sup>1</sup>, Joshua Cave<sup>1</sup>,<sup>1</sup>*University of Birmingham, Birmingham, UK*

Type two diabetes (T2DM) research is lacking in developing countries and risk scores to identify high risk individuals used in developed countries have questionable validity in developing countries. Validity of Cambridge Diabetes Risk Score (CRDS) was investigated in a cross-sectional study in Solomon Islands (SI), a developing country experiencing an epidemic of T2DM. 100 diabetic inpatients admitted to Kilu'ufi hospital (Malaita, SI) over a 4week period showed high variation of CDRS specific risk factors (BMI, smoking status, hypertension, family history) compared to corresponding figures from the UK and therefore invalidated the use of CDRS in SI with no modification.

**0124 An exploration of an asset-based approach to the management of diabetes in young people: a qualitative participatory approach**

Emma Green<sup>1</sup>, <sup>1</sup>*University of East London, London, UK*

This project explores an asset-based approach in young people with diabetes, particularly those defined as 'marginalised'. Asset-based approaches emphasise the capabilities and positive attributes of individuals and communities, which may be conceptualised as assets. Assets refer to both innate and developed factors that exist as a consequence of the genes, values, beliefs and life experiences of an individual. In addition, it will explore how these assets may be mobilised in order to improve outcomes for young people with diabetes. This project involves a qualitative systematic review, qualitative interviews with young people with diabetes and young people participating in asset-based initiatives.

**0127 Exercise Behavior of Middle-aged Patients with Hypertension**

Ruey Meei Lee<sup>1</sup>, <sup>1</sup>*Cardinal Tien Junior College of Healthcare and Management, New Taipei City, Taiwan*

It is known that exercise can effectively reduce blood pressure in hypertensive patients and is a very basic treatment in such group. However, exercise participation rate is low in this group.

The aims of this study were to understand the exercise behavior in the hypertensive middle-aged group and its affect behavior factors.

Cross-sectional correlational design was conducted. 248 patients diagnosed with hypertension and aged between 40 and 64 joined this study.

The results showed increasing self-efficacy can enhance physical activity in middle-aged hypertensive patients. The results provided a reference to encourage patients to participate activities.

**0133      Assessing implementation fidelity of a result-based financing intervention in Burkina Faso**

Oriane Bodson<sup>1</sup>, Sie Ahmed Barro<sup>2</sup>, Anne-Marie Turcotte-Tremblay<sup>3</sup>, Nestor Zante<sup>2</sup>, Valéry Ridde<sup>3</sup>,<sup>1</sup>*University of Liege, Liege, Belgium*,<sup>2</sup>*AGIR (Action Governance Integration Reinforcement), Ouagadougou, Burkina Faso*,<sup>3</sup>*University of Montreal, Montreal, Canada*

Our study provides an overview of the implementation fidelity of a RBF program in Burkina Faso using the aspect of "adherence" to intervention design. We conducted a case study in three health districts and at different levels of the health system one year after the program was implemented. On the whole, the results show quite good adherence to intervention design without a significant difference between districts. However, the different levels of care demonstrated heterogeneous degrees of fidelity. Moreover, implementation fidelity varies according to the component being discussed. Overall, the implementation respected the program agenda, even if small delays are identified.

**0169      The Pathological Internet Use Scale: Development, psychometric properties and validation**

Petros Roussos<sup>1</sup>, <sup>1</sup>*University of Athens, Athens, Greece*

A key element of research on Internet addiction is a valid and reliable assessment of problems individuals experience in their daily life due to pathological use of the Internet. The paper is built on data collected from seven different studies and addresses four major goals: (a) to present the development of a Pathological Internet Use Scale, (b) to test its factorial structure with exploratory and confirmatory factor analyses, (c) to verify its psychometric properties through convergent, divergent and incremental validities, and (d) to investigate correlations between participants' problematic internet use behaviors and personality characteristics, shyness, narcissism, loneliness, aggression and self-perception.

**0181      Pediatric HIV Disclosure in Kenya: Resources and Support that are Available and Needed**

Katrina Bennett<sup>1</sup>, <sup>1</sup>*Colgate University, Hamilton, NY, USA*

Disclosure of HIV status to infected children is important for ensuring effective care. In many countries, disclosure rates are low until adolescence. A qualitative study was undertaken to understand what resources are available or could be offered to make the disclosure process easier for caregivers in Kenya. Interviews

were obtained with health professionals and caregivers at Kenyatta National Hospital. Results indicated that combatting stigma surrounding HIV and creating developmentally oriented guidelines could be critical in easing pediatric HIV disclosure. Counselors and peer counselors proved to be important for pediatric HIV disclosure, although different resources were needed based on caregiver characteristics.

**0194 Neighbours helping Neighbours: Adapting Thailand's Successful Experience on Voluntary Community Health Workers (CHWs) for NCD prevention and control to Malaysia**

Pattaraporn Piwong<sup>1</sup>, Murallitharan Munisamy<sup>1,2</sup>, Tiwaporn Junkhaw<sup>1</sup>, Ratana Samrongthong<sup>1</sup>, Sathirakorn Ponganich<sup>1</sup>, <sup>1</sup>*College of Public Health Sciences, Chulalongkorn University, Bangkok, Thailand*, <sup>2</sup>*London School of Economics & Political Science, Kingsway, London, UK*

Thailand is one of the success stories of using Voluntary Community Health Workers (CHWs) to complement its formal healthcare system. CHWs in Thailand have been mobilised to assist their neighbours in NCD prevention and control efforts. Malaysia, Thailand's southern neighbour, is a country with similar social settings and cultural background. Malaysia has a rapidly increasing NCD prevalence and has never had integrated CHW programs. This prospective policy analysis paper seeks to determine the factors have been critical to the success of CHWs in Thailand and how they could be adapted to similar effect in Malaysia.

**0243 Improving Hand Hygiene Among Physicians and Nurses in a NICU in Armenia Through a Multimodal Hand Hygiene Strategy**

Amy Bamber<sup>1</sup>, Lisa Washburn<sup>1</sup>, Medge Owen<sup>1</sup>, Chirrl Lambeth<sup>1</sup>, <sup>1</sup>*Wake Forest University School of Medicine, Winston-Salem, NC, USA*

**OBJECTIVE:**

To increase hand hygiene in an Armenian NICU from 26% to 50%.

**METHODS:**

We provided an educational conference, reinforcing with simulated germs under UV light. Staff completed pre-and-post questionnaires. We translated and displayed the "Your 5 Moments for Hand Hygiene" poster, which the WHO agreed to upload for international access. A neonatologist recorded data 9/2015-12/2015.

**RESULTS:**

Adherence increased from 26% of 121 opportunities to 59% of 303 opportunities. Duration improved from 8.8 seconds to 22.9 seconds. Exclusive use of alcohol-based hand rub increased from 44.1% to 85.0% ( $X^2$  p=0.00045).

**CONCLUSION:**

Structured hand hygiene interventions resulted in improved hand hygiene.

**0247 Temporal trends of meningitis cases in the African Meningitis belt 1971-2014**

Katherine Dahill<sup>1</sup>, <sup>1</sup>*University of Warwick, Coventry, UK*

The 'meningitis belt' area of sub-saharan Africa has the highest rates of meningococcal meningitis worldwide. As well as claiming many lives the survivors are often left with long-term health problems. WHO data was used and analysed.

The country with the highest absolute number of cases was Nigeria. Several epidemics were noted overall and in individual countries. The temporal variation varied across periods and countries in the meningitis belt.

Four decades of meningitis surveillance in the 18 countries looked at showed that each country has individual trends and patterns, which could be further explored and used for future interventions.

0249

### **The Demand for Health Care Services in Rural America**

Tiffany Daniel<sup>1</sup>, [Lena Perez](#)<sup>1</sup>, <sup>1</sup>*LIU Post, Brookville, NY, USA*

Healthcare has recently undergone major transformation. These advancements have not penetrated rural communities. The significant disproportionality of physicians to residents is causing an inability to meet the increasing and varied medical needs within the population. Accessibility is negatively affected by elevated costs, limitations in transportation and medical technology. Proposed solutions include financial incentives, recruitment of International Medical Graduates and telehealth. Factors contributing to vast need for improved healthcare systems in rural populations are addressed, while analyzing solutions implemented and innovative ways rural institutions are adapting; creating patient-centered medical homes and launching independent initiatives to improve the health of their communities.

0254

### **Knowledge, attitude and practice of cardiovascular risk factors among adults in Ado-Odo/Ota, Ogun State, Nigeria**

[Kenneth Uche Onyekachi](#)<sup>1</sup>, Alero Ann Roberts<sup>1</sup>, <sup>1</sup>*College of Medicine University of Lagos, Lagos, Nigeria*

#### Framework

A steady increase of cardiovascular diseases informed the need to determine residents' knowledge and prevalence of risk factors of cardiovascular disease.

#### Methods

A descriptive study among 400 adults assessed their socio-economic status, knowledge of cardiovascular risk factors and lifestyle habits.

#### Results & conclusion

Despite good knowledge scores for CVD risk factors (71%) and lifestyle habits (smoking 7.0%, alcohol use 53.7%), 29.3% and 27.3% had raised blood pressure and sugar respectively. Gaps exist in those getting treatment for raised BP (18.8%) and high sugar (18.3%). Campaigns are needed to identify and manage previously undiagnosed disease in rural communities.

0257

### **Prenatal care and socio-economic status: Effect on Cesareans**

Carine Milcent<sup>1,2</sup>, [Saad Zbiri](#)<sup>3</sup>, <sup>1</sup>*French National Center for Scientific Research (PSE, CEFC), Paris, France*, <sup>2</sup>*French National Authority for Health (CEESP, IFAQ), Saint-Denis La Plaine, France*, <sup>3</sup>*University of Paris-Saclay (UVSQ, RISCQ), Montigny-le-Bretonneux, France*

The overuse of C-sections induces both increased costs and low quality of care. French data (104,391 deliveries, 2008-2014) and multilevel logit models were used to examine the impact of prenatal care on C-section rates, a question insufficiently investigated to date. Controlling for relevant factors, our results show that antenatal education decreases the probability of C-sections by 28%.

While precarious women are more likely to deliver by C-sections, they have low participation to antenatal education. Policy promoting antenatal education follow-up that would target primarily low-income women can cause real reductions of C-sections.

**0272                    Understanding the Onset of Hypertension Amongst American Immigrants and non-Immigrants**

Sashi Dayaratna, Ruby Risal  
*Shady Grove Adventist Hospital, Rockville, MD, USA*

This study examines the onset of hypertension amongst Americans utilizing the National Health and Nutrition Examination Survey compiled by the United States CDC. Through our modeling, we notice a statistically significant association between the educational level and the age of diagnosis of hypertension. We also notice statistically insignificant impacts of gender, ethnicity, and birthright citizenship. These results suggest that better educated people have earlier diagnoses of hypertension. This fact, coupled with the model's diagnostics, suggest that more highly educated people are more prone to develop hypertension at a younger age. Understanding these factors can have useful implications for preventative care.

**0276                    Analysis of a program to improve the geographical distribution of dentists in Brazil**

Mariana Gabriel<sup>3,1</sup>, Ana Paula Cavalcante de Oliveira<sup>1</sup>, Gilberto Alfredo Pucca Junior<sup>2</sup>, Fernanda Campos de Almeida Carrer<sup>3</sup>, Maria Ercilia de Araujo<sup>3</sup>, Gilles Dussault<sup>1</sup>, <sup>1</sup>*Instituto de Higiene e Medicina Tropical - Universidade Nova de Lisboa, Lisboa, Portugal*, <sup>2</sup>*Universidade de Brasília, Brasília, Brazil*, <sup>3</sup>*Faculdade de Odontologia da Universidade de São Paulo, São Paulo, Brazil*

**Theory/framework:** We analyzed the geographical distribution of dentists and its determinants as a contribution to improving the implementation of the National Oral Health Policy in Brazil. **Methods/hypotheses:** Interviews were conducted with graduates from the Faculty of Dentistry of the University of São Paulo who chose to practice in small cities. **Results:** Three main factors were identified as facilitators of this choice: place of birth, financial incentives and opportunity to work in the public oral health services. **Conclusions:** The effectiveness of the policy requires that planners take these factors into account to improve the geographical distribution of dentists.

**0283                    The Prevalence of Hypertension Amongst American Immigrant Seniors**

Ruby Risal, Sashi Abeysekera  
*Shady Grove Adventist Hospital, Rockville, Maryland, USA*

This study utilized the National Health and Nutrition Examination Survey compiled by the United States Center for Disease Control. Study suggests, the more amount of time immigrants have spent in the US, the older the onset of hypertension is noticed. We also notice statistically insignificant impacts of gender and ethnicity. This fact, coupled with the model's diagnostics, suggest that immigrants who have been in the United States for a shorter amount of time are more prone to develop hypertension at a younger age. Understanding these factors can have useful implications in generating approaches for preventing or mitigating hypertension amongst immigrant Americans.

0289

**Convergence in Health expenditure in the US States: the crisis effect**

Jesus Clemente<sup>1</sup>, Antonio Montañes<sup>1</sup>, Angelina Lazaro<sup>1</sup>, <sup>1</sup>*Zaragoza University, Zaragoza, Spain*

In this paper we analyze the evolution of health expenditure of US states. We use the Phillips-Sul methodology, as Panopoulou and Pantelidis (2013) also for the US case, it is shown that the behavior of health expenditure is the same for all states, when the sample covers the period 1980-2009. Furthermore, the results are due to the economic crisis. Thus per capita state spending tends to equalize as a result of the adjustments that have been made agents because of the crisis, although there are still significant differences between spending southwestern states with respect to the other states.

0293

**Pioneering Quality Improvement Strategies to enhance Antibiotic Stewardship at a rural South African Hospital**

Jitin Verma<sup>2</sup>, Michael Vonk<sup>1</sup>, Antuan Van Rooyen<sup>1</sup>, Jo-ann Visser<sup>1</sup>, <sup>1</sup>*George Provincial Hospital, Western Cape, South Africa*, <sup>2</sup>*NHS Thames Valley and Wessex Leadership Academy, Thames Valley and Wessex, UK*

A prospective interventional study was conducted over 6 months in a South African regional hospital. We systematically evaluated the quality of the Antibiotic Stewardship programme through chart review, observing ward rounds and auditing surgical prophylaxis to improve the appropriateness of antibiotic use. An intervention phase was conducted raising awareness, educating and training healthcare staff, adopting a checklist on ward rounds and presenting results to key stakeholders. Post-baseline data revealed an improvement in the completion of the chart with the average increasing from 65% to 79%. I can now enact sustainable change in important leadership roles through improved communication and self-knowledge.

