

## Exchange 1

12:40

### Lifestyle and Wellbeing: Obesity, Cancer and Diabetes

Session title ABSTRACT PRESENTATIONS

Chair Dr Jose Eduardo Bittar, Centre for active design

Ref: 181 Oral

Physical Activity Level of Type II Diabetic Patients

Presenting author: **Malik Monica**

Government Home Science College, Sector 10, Chandigarh, UT, India (PIN- 160011), Government Home Science College, Sector 10, Chandigarh, UT, India (PIN- 160011), India.

Co-authors: Bhansali A, Pradhan P, Singh K, Reen R

Author request: not for publication

**Ref: 681 Oral**

The food production enigma and the spectrum of malnutrition in Urban Tanzania

Presenting author: **Zohra Lukmanji**

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Co-authors:

**Introduction:** Nearly half the people of Tanzania are reported to be undernourished, consuming undiversified diets that contain roughly 50% of the recommended caloric intake. Paradoxically, over nutrition with the consumption of high fat, energy dense foods is also on the rise, and with a decreasing level of physical activity, the resultant clinical sequel such as diabetes and heart disease are beginning to cause major health concerns. This trend of over nutrition is increasing in all geographic settings and across all age groups; its effects, however, are most dire in urban areas. Increased public awareness of obesity as a risk factor for many morbid conditions has been shown to be inadequate as a preventative measure. Importantly, co-existence of over and under nutrition in women and children is observed in regions reported to have highest main staple food production (rice and maize). **Aim:** To report on the coexistence and high rates of over nutrition and under nutrition in women and children in urban settings and food secure regions in Tanzania. **Design:** Review and analysis of data from national demographic health surveys, Tanzania step surveys and nutrition status surveys among school children in urban areas as well as agriculture and food production reports in Tanzania. **Setting:** Schools and the general community in rural and urban Tanzania. **Subjects:** Separate analyses for children under five years of age, school age children age 6-14, and women 15-49 years old. **Results:** Wasting and the percent of children who are underweight are on the decline in the children below 5 years, however, by the time children reach school age, the prevalence of being underweight increases dramatically, as does obesity. Paradoxically, high prevalence of stunting overlaps with the areas of Tanzania that produce the most food. Prevalence of obesity in children <5 years also overlaps with these 'food basket regions'. In adult women, obesity is higher in urban areas while the percent of women who are underweight is higher in rural areas, though they are on the rise and a significant problem in both settings. Consumption of fruit and vegetables per day did not meet the WHO recommendations of 5 servings and 400 g/day in 90% of Tanzanian population surveyed. Coincidentally, more than 1/3 of the adult population is affected by hypertension and is currently on medication for it. **Conclusion:** The review and analysis of all the available information demonstrates the increasing trend of over nutrition among all age groups of Tanzanian population, in particular in urban settings, and the prevalence of both under nutrition and over nutrition in children <5 years and women age 15-49 years overlap with the 'food basket regions'. Public awareness of the effects of obesity is inadequate and alternative strategies needed to be implemented to prevent this problem from expanding.

**Ref: 760 Oral**

Are interventions effective in managing Alzheimer's at the outset of the disease and beyond?

Presenting author: **Nitesh Rathod**

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Co-authors:

Alzheimer's disease (AD) in recent years has become an ever growing issue for individuals around the world. Currently the United Kingdom possesses an aging population which is making the enquiry question to this dissertation a very current topic. AD affects a series of mechanisms on the cellular and functional level. Research into this disease has enabled me to appreciate the subtle nature of the progression of degenerative diseases. Within the contents of this piece, I present a comprehensive review of the studies carried out to assess the crippling nature of this disease. The objectives of this dissertation lie in establishing: (1) the causes (both sporadic and familial) of AD, (2) effects on both the sufferer and members of society; (3) the mechanisms that cause the gradual degradation of cognitive abilities which negatively affect motor control resulting in a fall in praxis, memory and response performance, and (4) the effectiveness of interventions of various forms to treat the disease. Balancing the studies observed it is possible to draw the conclusion that currently the use of Galantamine protein accumulation inhibitors and diagnosis via magnetic resonance imaging are the best forms of available treatments. This does not however mean that other therapies such as the introduction of nerve growth factor or stem cells may not be potential cures or successful treatments for future sufferers.

**Ref: 399 Oral**

Are Women With Disability and Multi-Morbidity Being Screened For Cervical Cancer? A Retrospective Cohort Study in Ontario, Canada

Presenting author: **Dr. Sara Guilcher**

St. Michael's Hospital, 30 Bond St., Canada.

Co-authors: Dr. Aisha Lofters, Dr. Rick Glazier, Dr. Susan Jaglal, Ms. Jennifer Both, Dr. Ahmed Bayoumi

**AIMS:** To determine the relationship between up-to-dateness on cervical cancer screening and level of disability for screening-eligible women in Ontario. To determine the influence of relevant sociodemographic variables and health-related variables, including level of morbidity, on up-to-dateness of screening for these women. **DESIGN:** This is a retrospective population-based cohort study using multiple linked administrative health databases, including two waves of the Canadian Community Health Survey (2005 and 2007/08). **SETTING:** This study was set in Ontario, Canada's most diverse and populous province. **PARTICIPANTS:** There were a total of 22,824 women included in the study, 7,600 of whom reported some level of disability. **RESULTS:** Women with disability tended to be significantly older, less educated, and of lower income than women without disability. They were slightly less likely to live in large urban areas, and slightly more likely to live in small urban areas. Women with disability were also more likely to be separated or divorced, and more than four times as likely to have at least two chronic conditions: 36.2% had at least two chronic conditions versus 8.4% among women without disability. Differences across sociodemographic characteristics tended to be more pronounced as level of disability increased from moderate to severe. Overall, 62.7% of women with no disability had been appropriately screened for cervical cancer versus 53.6% of women with some level of disability. The lowest screening rate overall was seen for women with severe disability and less than secondary school education (33.0%) and the highest was seen for women with no disability and who had a household income of at least \$100,000 per year (72.4%). In multivariable logistic regression, age, rurality, education and household income were each independently associated with cervical cancer screening. There was a significant interaction between level of morbidity and level of disability. Women with a higher level of disability were more likely to have significantly lower odds of screening than women with a lower level of disability as their level of morbidity increased. **CONCLUSION:** As the population ages, the number of persons in the province of Ontario with complex medical needs is increasing. Our findings that women with physical disabilities and with co-morbid conditions are not being screened for cervical cancer at the same rate as their peers and that they have lower socioeconomic position, which also influences screening, are concerning as they suggest that this vulnerable and growing population is not receiving appropriate quality preventive care. Policy makers should take note of these results as they work toward improving primary health care for all.

## Exchange 1

14.00

### Health Promotion / Health Equity, Inequalities and Disparities

Session title ABSTRACT PRESENTATIONS

Chair Professor Paula Andrea Martins

#### Ref: 297 Oral

Knowledge And Perceived Barriers For Application Of Health Promotion Approach Among Public Health Midwives In Kandy District

Presenting author: **Manuja N. Perera**

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Co-authors: Nalika Gunawardena, G. N. Duminda Guruge

Introduction Ottawa Charter (1986) defines Health Promotion, as the 'process of enabling people to increase control over, and to improve, their health'. National Health Promotion Policy recognized health promotion as an efficient and cost effective approach to promote health in Sri Lanka. The policy makers and national level programme managers are currently trying to integrate health promotion principles to the primary health care system. Public Health Midwife (PHM) is the grass root level health worker promoting health in communities and their knowledge regarding health promotion approach has not been assessed. Objectives To describe knowledge on health promotion approach; factors associated with it and perceived barriers for application of health promotion approach among PHMM in Kandy district.

Methods A cross sectional descriptive study was conducted among all PHMM (n=364) in Kandy district who were eligible, using a self-administered questionnaire. Level of knowledge was based on scores obtained for responses for close ended questions and case scenarios. Results Knowledge on health promotion was 'poor' among 238 (65.4%). Incorrect labeling of other activities as activities using health promotion approach was common (70.6%). Training programmes (73.9%) were the commonest source of knowledge while 95 (26%) were never trained on health promotion approach during their career. A basic educational level of GCE A/L or higher ( $p=0.001$ ), ability to read English ( $p=0.012$ ) and access internet ( $p=0.025$ ), qualifying as a PHM in 2004 or after ( $p<0.001$ ), participating in health promotion training programmes ( $p=0.003$ ) and involving in programmes using health promotion approach ( $p=0.007$ ) were associated with 'good' knowledge on health promotion. The commonest perceived barrier was inadequate opportunities to learn health promotion (73.6%). Conclusions and Recommendations Knowledge on health promotion was 'poor' among PHMM in Kandy district. The study recommends increasing learning opportunities, building capacities of MOH level resource personnel, improving English language skills and availability of internet facilities to improve the situation.

**Ref: 206 Oral**

Exploring Barriers and Best Practices for Persons with Disabilities through Photovoice in an Urban Setting

Presenting author: **Ozge Karadag Caman**

Hacettepe University Institute of Public Health, Hacettepe Universitesi Halk Sagligi Enstitusu, 06100, Sıhhiye, Ankara, Turkey.

Co-authors: Baki Can Metin, Burcu Kucuk Bicer

**Aims:** This study aimed to assess main barriers and best practices for persons with disabilities in an urban setting with respect to the accessibility of services and participation in urban life. **Design:** Photovoice method was used in this qualitative study as a participatory action research strategy. **Setting:** The study was conducted in Ankara, the capital of Turkey, with the partnership of university, municipality and the community. **Participants:** The study included 42 participants in the 18-35 age group with either physical or visual disabilities. **Results:** Participants identified important barriers in access to healthcare, education, and participation in social life as well as several best practices that increase participation of persons with disabilities in urban life. Main barriers and best practices were reported for urban transport, pedestrian roads, parks, sports fields and public institutions including healthcare facilities and schools. **Conclusions:** Municipalities need to deliver more evidence and needs-based services for persons with disabilities in urban settings. Community participation in decision-making may have a significant contribution in improvement of services. **Keywords:** Photovoice, qualitative research, persons with disabilities, urban health, municipalities

**Ref: 270 Oral**

Formative Research And Community-Based Health Promotion Program In A Low-Income Brazilian Urban Area

Presenting author: **Gabriela Milhassi Vedovato**

Federal University of Sao Paulo, Brazil, Ana Costa Street, number 95 - Santos, Sao Paulo, Brazil, Brazil.

Co-authors: Matheus Melzer, Angélica Barbosa Neres Santana, Thais Furlani, Paula Andrea Martins

Community engagement efforts are key process to design effective health promotion programs. This study aims at describing the experience of a formative research to inform the development of an intervention focusing on Nutrition Environmental changes in a low-income community. The project AMBNUT: HEALTH AND ACTION has been developed in the Northwest region of Santos City, Brazil. Community actions were held on a weekly basis in a Non-Governmental Institution in order to guide community building and offer data to design and implement a geographically and culturally appropriate intervention program. The actions started in October 2012 through a preliminary workshop to assess community needs and resources, and to raise peoples' perceptions and involvement related to environmental changes in their neighborhood. The subsequent thematic workshops focusing on healthy eating and physical activity were evaluated by direct observation using a semi-structured guide and fieldwork notes. Interdisciplinary meetings of the research team provided the planning, execution and evaluation of the participatory approach. Were performed 26 workshops until October 2013 (mean=7 participants/day) with topics such as: encouraging the intake of vegetables, fruits and whole grains; discouraging the intake of ultra-processed food; understanding food labeling; physical exercises to do at home and evaluation of physical fitness. These activities involved participatory, dynamical and culinary activities, which improved health literacy, critical consciousness, intention to change behavior, and stimulated individuals' autonomy and empowerment. The workshops also helped to formulate meaningful research questions to be explored in additional methods, e.g. in-depth interviews, focus groups, surveys, and guide the next steps of the community-based program. These activities have contributed to the creation of a community advisory committee to support social development, improve community capacities and further interventions in the Nutrition Environment. In conclusion, formative research is a useful comprehensive approach to enhance community development, build trust in academic-community partnerships and address environmental changes to improve health in urban areas.

## Ref: 390 Oral

Maternal abdominal obesity and female gender are associated with abdominal obesity in children living in an urban area.

Presenting author: **Paula Andrea Martins**

Federal University of São Paulo, Ana Costa Avenue, 95 - Santos/SP, Brazil.

Co-authors: Matheus Ribeiro Theodósio Fernandes Melzer, Isabella Mastrangi Magrini, Paula Andrea Martins

**Background:** Abdominal obesity in children has been associated with cardiometabolic risk factors, individual and environmental characteristics. **Aim:** To assess the association of dietary and socioeconomic factors, sedentary behaviors and maternal nutritional status with abdominal obesity in children living in an urban area. **Design:** Cross-sectional design with household-based survey. **Setting:** The urban area of Santos City in Brazil. **Participants:** A sample of 357 mothers and their biological children aged 3-10 years residents of 36 randomly selected census tracts. **Methodology:** Two interviews were conducted by health professionals previously trained by the Nutritional Environment Assessment 'AMBNUT' research group for data collection which included socioeconomic and physical activity questionnaires, anthropometric measures (weight, height, waist circumference, skinfolds) and two 24h recall, one on each visit.

Assessment of children's abdominal obesity was made by waist circumference measurement, in the midway between the hip bone and their lowest rib. For classification it was used the cut-off points proposed by Taylor et al. (2000) which uses the 80 percentile of waist circumference and a model for the multiple logistic regression was adjusted for analysis using the SPSS version 18 software. Consent forms were collected before the first visit. Households which mothers had gone through bariatric surgery, had cancer, AIDS or were pregnant were not interviewed. **Results:** It was found that 30.5% of children had abdominal obesity. Univariate analysis showed significantly associations ( $p < 0.05$ ) were found with children's body mass index (BMI) for age equal or higher than 1 z-score, maternal abdominal obesity by waist circumference above 80cm, maternal total fat above 32 percent, maternal overweight classified by the World Health Organization cutoff points for BMI, higher socioeconomic status classified according to their purchasing power by the Brazilian Association of Survey Companies, household car possession and higher protein intake. In the multivariate regression model, it was included all variables with a  $p$  value  $< 0.2$  in the univariate analysis, and for the adjusted model children's BMI for age (OR: 93.7 IC95% 39.3-223.3), female gender (OR: 4.1 IC95% 1.8-9.3) and maternal abdominal obesity (OR: 2.7 IC95% 1.2-6.0) were significantly associated, regardless of socioeconomic status, which lost its significance. Nor sedentary behaviors or other dietary factors showed significance in the analysis. **Conclusions:** Abdominal obesity in children seems to be more associated with maternal nutritional status, other indicators of their own nutritional status and female gender. More studies are needed for better understatement of the use of waist circumference on children. Nutritional education programs on urban areas should focus on working with both mother and children for a better outcome on children's health.

## Ref: 369 Oral

The 'Health villages' as a strategy of health promotion and territorial development

Presenting author: **Manuela Ricci, director of Focus research center of Sapienza University of Rome, Design and architectural, territorial, environmental technologies, Faculty of Architecture**

Focus Research Center, Sapienza University of Rome, via Flaminia 70, Rome, Italy.

Co-authors: Fausto Felli, medical doctor, expert in geriatrics, president of Equity in Health Institute Bruno Monardo, Design and architectural, territorial, environmental technologies, Faculty of Architecture, Sapienza University of Rome Pietro Paolo Valentino, Depa

aims The Fo.Cu.S. Research Centre of Sapienza University of Rome and the Equity in Health Institute had worked on a pre-feasibility study to evaluate healthy ageing services, in order to support local development and the regeneration of small towns; the paper describes the main characters of the philosophy and the functionality of the proposed model. design Health villages is a form of health tourism that: - educates about new lifestyles that will assist the population to age in a healthier way, thus reducing the costs of medications and hospitalization; - increases the attractiveness of territories, especially of small rural towns rich in cultural and environmental resources, but socially and economically in decline. This initiative has two objectives: - Public spending and medication, reducing, thanks to health promotion strategies, the cost of the pharmacological approach; - The regeneration/revitalization of small towns, through the establishment of new key functions and the re-use of the architectural heritage. This idea is particularly feasible in Italy, where small centres, bearing high quality architectural heritage, attractive landscapes, and healthy environment, will be able to accommodate the new educational direction and prevention. The Health Village model embodies an original formula that sees a stay in the village as the highlight of a long process of ageing education. It should not be seen as a hospital, nor as care home, and neither is the goal to develop 'tourism therapy', nor elitist versions of wellness. The target for this type of trial is very large, covering every self-reliant person over the age of fifty who intends to undertake the process. The idea was conceived in Italy and presented in the II meeting of the Longevity Forum organized by the Italian Institute for Quality of Life in Rome in 1988. The model became the candidate for the European Commission's proposal for the European Innovation Partnership on Active and Healthy Ageing. Healthy ageing is, in fact, a strategic objective for European policies (2012 was declared the European Year for Active Ageing and Solidarity between Generations), particularly with respect to the growing number of people implicit in the term mass longevity. results and conclusions Strong public involvement is necessary to launch the initiative, as the starting initiatives show (in Sardinia and in Molise Regions). The institutional leaders of this approach are the Regions; a structured governance system and private/public sector partnerships are also important. The proposed model clearly identify the criterions which must guide to the realization of a Health village as an integrated system of services (accessibility, productive resources, natural and cultural heritage). The main results of the financial feasibility analysis will show the conditions of the investment attractiveness for institutional actors and businesses.

Ref: 172 Oral

Brazil's Capacity To Address And Respond To Urban Related Diseases

Presenting author: **José Eduardo Bittar**

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Co-authors:

The purpose of this study is not only to identify and compare relationships between the current Brazilian urban scenario and its consequence on the health of the population but also design strategies to promote changes. Over the past few decades, Brazil has been characterized by high rates of industrialization and urbanization. On a population of 200 million, 82% now live in urban areas, where urban and social problems are widespread. To name just a few: sprawling, road traffic injuries, pollution, physical inactivity and violence. The historical inequity and absence of planning still maintain the chaotic urban expansion which harmfully affects lifestyle and public health. Many years ago communicable diseases were the main cause of mortality in Brazil, but nowadays it has been following the developed countries' trends as to lifestyle and eating habits. Non Communicable Diseases are the main cause of deaths in Brazil (74%). Brazil has available funds for NCD treatment and control, prevention, health promotion and surveillance, monitoring and evaluation. There are also specific policies, programs, and action plans for the following diseases:- Cardiovascular diseases - Cancer - Chronic respiratory disease - Diabetes - Alcoholism - Unhealthy diet/Overweight/Obesity - Physical inactivity - Tobacco Recent research on the health impacts of the built environment has led to a better understanding of how contemporary land use planning can influence physical activity, obesity and related chronic diseases. Brazil economic growth shows some potentialities but also some bottlenecks for the development of the country and its consequence on public health. The current picture is somewhat favorable, since the Constitution guarantees the right to a sustainable and an equitable city, the federal law sets the guidelines for City Planning, the Affordable Housing Program and the Urban Mobility National Policy, which are under sustainable guidelines at early implementation. The author emphasizes that in Brazil no strategy has been developed to set urbanistic criteria to promote an active lifestyle i.e. prioritizing efficient transportation (walking, bicycling and transit use), land mixed use, density increase, connectivity and parks. In order to establish a long-term planned legacy involving health promotion through city redesign the author suggests an intersectoral action to the following National Plans: 1) Growth Acceleration Program 2) Affordable Housing Program (My House My Life Program) 3) Urban Mobility National Policy The old, car-centered vision and the urban sprawl still remain while global coalitions fight for a healthier lifestyle. The problems related to the current urban scenario do have technical solutions. However, implementing these solutions is a considerable political challenge.

## Exchange 2

11:00

### Transdisciplinarity in Urban Health

Session title Arts, Quality of Life and Urban Health

Chair Mr Danny Lane on behalf of Dr Paul Whittaker

Ref: 649 Oral

Mercury and lead concentrations in general population from Bogota 2012/2013

Presenting author: **Samuel David Osorio García**

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Co-authors: Luis Jorge Hernández Flórez, Diana Pérez, Zaideé Barbosa, Adriana Ruiz, Yady González, Rodrigo Sarmiento, Alejandra Díaz

Objectives To establish the prevalence of mercury and lead in general population from Bogotá, their possible effects on human health, and the relationship with risk areas of environmental exposure.

Methods Sample of 401 individuals, it was randomly distributed by place of residence and environmental risk area of exposure to mercury and lead (high, medium and low risk). A specific medical assessment was made, and biomarkers: lead (blood) and mercury (blood, hair, and urine) were quantified in the laboratory of the District Health Secretariat of Bogotá. A descriptive analysis was conducted using Epidat 4.0. The field phase was conducted between September of 2012 and July of 2013. Results 401 individuals participated: 300 women (74,8 %), aged 3-91 years (mean = 46 years); most common occupation: housewife (45,1 %). Concentrations means: mercury: 1,00 µg/g (hair), 3,13 µg/L (blood), and 0,29 µg/L (hair); blood lead: 8,67 µg/dL. The zone of high risk of exposure had the higher means of mercury in urine (0,36 µg/dL) and hair (1,10 µg/g), but the higher means of blood lead and mercury were found in the zone of medium risk. 54 (13,5 %) individuals had mercury concentrations above the reference values (OMS), and 10 (2,5 %) for blood lead (CDC). People from localities of the south of the city had the higher concentrations means of lead, within a geographical continuity. There was a correlation between age and mercury in blood and hair (Pearson correlation index: 0,176 and 0,172 respectively). Memory problems was the clinical finding more frequent in people with high levels of mercury and lead (79,6%/70%), followed by tremor (46,3%/30%), and attention problem (25,9%/20%). Conclusions General population from Bogotá is exposed to mercury acute and chronically, and to lead acutely. Concentration means of mercury and lead doesn't seem to correlate well with zones of risk of exposure to these substances. Some localities from the south of the city seem to have a particularly high exposure to lead, with a geographical continuity. Mercury seems to bioaccumulate in people over time. The most frequent clinical findings in people with high levels of mercury and health are unspecific. It's necessary to identify sources of exposure to mercury and lead in Bogotá, in order to monitor and control them.

**Ref: 394 Oral**

The Centralization of Services for Young Offenders: Youth in custody respond to the urbanization of Youth Custody Services

Presenting author: **Brynn Warren**

McCreary Centre Society, 3552 East Hastings Street, Vancouver BC, V5K 2A7, Canada.

Co-authors: Stephanie Martin, Ewa Monteith-Hodge, Annie Smith

**INTRODUCTION:** Since 2000 the McCreary Centre Society has been researching the health of youth in the custody system in British Columbia (BC), Canada, as well as empowering youth in the custody system to engage in their own health data to create change. **Setting:** In 13 years there have been many changes made to the youth justice system in BC, including a declining number of youth receiving custodial sentences which has resulted in a downsizing of custody centres and increased urbanization of services. When research began on the health of youth in custody there were seven centres across the province. At this time only three centres remain, located in Vancouver, Victoria and Prince George. The declining rates of youth in custody has also resulted in a centralization of services for girls who enter into custody to one centre in metro Vancouver, the largest of all three youth custody centres. **DESIGN:** In 2012, 114 youth in custody completed a 146 question survey asking about a range of health promoting and health risk behaviours. In 2013 McCreary Centre Society began 'Next Steps' workshops in all three custody centres. The Next Steps is an interactive workshop series designed to engage youth in their own health data and give youth a voice in the creation of youth health knowledge. Youth engaged in interactive activities surrounding their own health data and took part in in-depth discussions of their own health issues, as well as those they saw in their communities. Youth provided context for the data, identified key health issues that were of most importance to them and gave recommendations for improvement to government and community services, organizations that serve youth in conflict with the law, and to the Government of British Columbia's Ministry of Child and Family Development. **PARTICIPANTS:** Ten Next Steps workshops were held, one with every unit in operation in BC at the time. Around 50 youth participated, both male and female. Youth were from all over BC including urban centres and rural communities. **RESULTS:** Youth in custody showed incredible engagement in the results of the health research and in creating change in the health services in their communities and in Youth Custody Centres. Youth identified declining numbers of youth serving custodial sentences and the urban centralization of services as having a major impact on their experiences in custody and on the effectiveness of services designed to help keep youth out of custody. Access to programs such as job training, creating effective and concrete release plans, and maintaining contact with family and other supports in their communities were all areas where youth recommended changes be made to address the issue of declining numbers of youth in custody and the urban centralization of Youth Custody Services.

### Ref: 495 Oral

Gender Dimensions of Forgiveness in marital infidelity and 'Magun' phenomenon among Yoruba People in Southwest Nigeria

Presenting author: **Ojo Melvin Agunbiade**

University of the Witwatersrand, South Afric, Obafemi Awolowo University, Ile-Ife, Nigeria, Nigeria.

Co-authors:

This study explores the contextualization of forgiveness in marital relations as espoused in adultery and the adoption of 'magun' among the Yoruba people in Southwest Nigeria. A purposive sampling technique was used in selecting all the participants. Eight focus group discussions and 27 in-depth Interviews were held with 27 renowned traditional medicine practitioners. Findings showed acceptance and demonstration of forgiveness in marriage as a phenomenon tied more to circumstances and gender of the offender. 'magun' was construed as essential to maintaining marital fidelity and not wickedness or lack of pity towards women. Both men and women could be magun victims; however, only the males that possess the right spiritual antidote to magun can avoid the effects during intercourse. Culturally, only the males are allowed to place magun on females or spouse. Hence, the contextualised nature of forgiveness in marital infidelity among the Yoruba people could be counterproductive in maintaining healthy relationships among family members and their close associates.

## Exchange 2

12.45

### Health Promotion / Health Equity, Inequalities and Disparities

Session title ABSTRACT PRESENTATIONS

Chair Ms Hilary Dreaves

#### Ref: 215 Oral

Exploring the relationship between occupational grade, location of residence and health inequalities using a GIS method

Presenting author: **Subhashis Basu**,

Sheffield Occupational Health Service/ University of Sheffield, Silverwood, Occupational Health, Northern General Hospital, United Kingdom.

Co-authors: Giles Ratcliffe

**Background** Although the association between health outcomes and job type has been extensively explored through the Whitehall and GAZEL studies; little is known about the influence of location of residence in determining health inequalities across different occupational groups. Geographical Information Systems (GIS) provide a method by which to display spatiotemporal relationships between environmental exposures and health outcomes which can be analysed using statistical software to understand these associations in more detail, and inform urban development and planning. **Aims** This study aimed to identify the relationship between residents' occupation, health outcomes and ambient air quality exposure using a GIS software package to inform local occupational health policy in this area.

**Design** Cross-sectional, ecological representation of the distribution of health inequalities according to residents' occupational status using a GIS. Job type was categorised into standard occupational groups. Exposures and outcomes measured included life expectancy, cardiovascular and respiratory morbidity, and ambient air quality. Setting Rotherham, a city in the north of England with a population of around 250,000 with a strong mining, steel and industrial heritage. The city is close to two major motorways, and experiencing levels of deprivation above the national average. **Results** Inequalities in health outcomes and ambient air quality exposure by residents' occupational grade were identified, and the statistical significance of relationships assessed. Unemployed individuals and those performing manual jobs were most affected. **Conclusions** As far as we are aware, this is one of few studies to use a GIS method to explore health inequalities by occupational type according to location of residence. Our findings support recent initiatives in the United Kingdom to address these issues through collaborative working between public health and occupational health professionals. This process performed elsewhere to identify similar relationships.

**Ref: 498 Oral**

The Unintended Consequences of Incentive Provision

Presenting author: **Dr Gill Thomson**

University of Central Lancashire, Brook Building, Preston, PR1 2HE, United Kingdom.

Co-authors: Dr Heather Morgan, Dr Nicola Crossland & Professor Pat Hoddinott

**Background and Aims:** Financial (positive or negative) and non-financial tangible incentives or rewards, such as free or reduced cost items or services that have a monetary or an exchange value, have been widely used to influence public health behaviours. Whilst the unintended consequences of incentive provision are alluded to in the literature, to date there has been little detailed exposition of what these consequences may be. We aimed to investigate the positive and negative unintended consequences of incentive provision for smoking cessation in pregnancy and breastfeeding. **Design:** A mixed methods study to inform trial design. Benefits of incentives for breastfeeding and smoking cessation in pregnancy (BIBS): <http://www.nets.nihr.ac.uk/projects/hta/103102>. **Setting:** North-West England and Scotland.

**Participants:** A diverse sample with and without direct experience of incentive interventions. Qualitative semi-structured interviews and/or focus groups were held with 88 pregnant women/recent mothers/partners; 53 service providers; 24 experts/decision makers and interactive discussions with 63 conference attendees. Maternity and early years health professionals (n=497) participated in a web-based survey with open questions on positive and negative consequences. Two service user mother and baby groups from disadvantaged areas were involved as study co-applicants. **Results:** Strongly held views on positive and negative consequences were identified. Positive consequences concerned: health and emotional wellbeing relating to success for women and partners; pride and job satisfaction for professionals; engagement in health promoting services; women feeling valued for their effort; and helping to provide resources to those most in need, thus addressing poverty. Negative consequences related to: increased health inequalities through diminished personal responsibility and motivation; gaming and cheating leading to negative consequences for health as well as the reputation of the intervention; adverse effects on relationships at home and with health professionals; the re-sale value of the incentive generating risks of domestic abuse; the endorsement of behaviour related incentives creating an illusory correlation of needing them to succeed; and perceptions of wasting NHS funds, with consequent opportunity costs for other services, which might benefit from the resources. **Conclusions:** The utility and acceptability of incentive provision is a controversial area which generated emotive and oppositional responses. Evaluation of incentive interventions to maximise the potential for positive unintended consequences and mitigate negative unintended consequences needs to be integral to the planning, design and delivery of incentive programmes.

**Ref: 501 Oral**

Health Impact Assessment Paris Transport Action Learning Set

Presenting author: **Hilary Dreaves**

University of Liverpool, International Health Impact Assessment Consortium Department of Public Health and Policy Institute of Psychology, Health and Society University of Liverpool Liverpool L69 3GB, United Kingdom.

Co-authors: Anne Laporte Muriel Dubreil

Health Impact Assessment (HIA): Paris Transport Action Learning Set (ALS) As part of a wider programme of capacity building in Health Impact Assessment (HIA), Agencie Regionale Sante (ARS) and Plaine Commune, Paris, jointly commissioned IMPACT, University of Liverpool to facilitate a HIA of proposals to extend and new build the transport infrastructure in Grand Paris. The scope of the HIA included examining three elements of the infrastructure extension, in three of the most deprived cities in Paris. Following initial training of a group of some twenty potential members of the ALS, a smaller working group of some eight people met five times over a period of eight months. The ALS members undertook and delivered the HIA report to the commissioners, facilitated by IMPACT. This presentation reports on the actions, learning and advantages of adopting a HIA ALS approach in undertaking the first ever HIA in Paris and embedding HIA principles in partnership work between new organisational partners.

## Ref: 552 Oral

Healthcare system in Republic of Macedonia as a social determinant of health: an analysis of equity and access to health services

Presenting author: **Dance Gudeva Nikovska**

Department of Social Medicine, Faculty of Medicine, University Ss Cyril and Methodius, 50-ta Divizija No.18/2 1000 Skopje, Macedonia.

Co-authors: Tozija Fimka

Background Health is a complex phenomenon and equity as a basic human right is an integral part of constitutions and missions of health policy in almost all countries in the world. Yet, WHO definition of health as a 'state of complete physical, mental and social well-being and not merely the absence of disease or infirmity', although not revised to date, is intensively becoming subject to criticism as limited, suggesting that health should be observed as a complex phenomenon. Research of various type and magnitude in the past 2 centuries show convincing evidence on association between factors in society and population health status in all countries and societal establishments. Aim The aim of the survey is to analyze current policies and processes that have influenced equity and social determinants of health status of population in Republic of Macedonia after the independence in 1991, through analysis of the structural determinants of health and health inequity. Survey of this type has never been conducted in Macedonia and the gap in the health status among poor and wealthier population strata has never been systematically studied, thus leading to policies and programs that are targeting entire population, rather than targeting vulnerable groups. Methodology Desk review and evidence synthesis of documents from relevant sectors, as well as publications and other relevant materials were used to perform the analysis, as to capture information on the health system as structural determinant of health, as defined in WHO Commission on social determinants of health (SDH) Conceptual framework,. Results Our literature review included keywords: Macedonia, equity, health system, and has resulted in identification of 952 documents in the electronic databases and manual search of documents available at Ministry of Health. 195 documents were included in analysis of the health system after the independence. Discussion Available literature shows that health system in RM has faced numerous challenges, under conditions of transfer towards market economy, some of which remain to date. Health reforms aimed at universal access and equity are not continuous and are influenced by numerous internal and external factors. Although limited in number, existing evidence implies existence of inequity in number of societal segments that affect equity in health status and access to health care for population in RM. Life expectancy of population is below EU average and individuals live almost 12% of their lives (8.6 years) with some disease. Gini index has increased from 28.1 in 1998, to 43.2 in 2009 and the country's health system is ranked 59 out of 142 countries by the Legatum prosperity index, which implies inequity and the need for further exploration of basic health indicators and underlying causes.

# Wednesday 5th March

## Exchange 2

14:00

### Health Promotion / Health Equity, Inequalities and Disparities

Session title ABSTRACT PRESENTATIONS

Chair Ms Hilary Dreaves

#### Ref: 29 Oral

Complex care needs of patients with late-stage HIV disease: A retrospective study

Presenting author: **Nicole Schaefer-McDaniel**

Casey House, n/a, United States.

Co-authors: Mark Halman, Soo Chan Carusone, Sarah Stranks, Nicole Schaefer-McDaniel, & Ann Stewart

Author request: not for publication

## Exchange 3

14:00

### Health Economics, Policy and Management

Session title Transforming cities using history and innovation

Chair Colin Cox

Ref: 101 Oral

Georgian Health Reforms as an Experience for Future

Presenting author: **Kakhaber Djakeli**

International Black Sea University, Agmashenebeli ave 13 th km Tbilisi 0170 Georgia, Georgia.

Co-authors:

The aim of this article is to compare two Health Reforms undertaken by Georgian government, to follow logic of the government and health economic thinking of the country and find causes of success or failure. During first health reform in 1994-1995, Georgian country started to build some mix from Social Health Insurance (SHI) and taxed finance (TF) system, but failed due to lack of financing, proper management and bribing. 'Social health insurance (SHI)', a model of health financing where a person's entitlements to health care derive from earnings-related contributions, is enjoying something of a revival in parts of the developing world (Wagstaff, 2009). But taxed finance was a prerogative of well developed country with sustainable economy. During the second health reform in 2004-2007, when the new, more private forms of health finance and service delivering were implemented by government, the results were better. The model of 2004-2007 was totally new and that's why it can be entitled as a Model of Bendukidze (MB), hence, Georgian Vice Prime Minister Bendukidze supported its born and implementation into health system of the country. Because two totally different types of health reforms already took place in Georgia during such a short period, it would be interesting to assess their main features and reasons for choosing these models of healthcare among other possible alternatives and discuss its effectiveness for the country. The article is based on a literature review of scientific publications about health of Georgia and focus group interviews undertaken in 2013 at international Black Sea University. More than 60 articles were selected for more detailed consideration as they present empirical analyses of Georgian health care reforms and health policy change. To analyze satisfaction of Georgian customers by past and new health system of Georgia 10 focus groups were gathered and more than hundred people were invited to it. Specially printed Cards were distributed to focus group members to recall their health related cases. All these cases were discussed in focus group sessions with one aim, to clarify satisfaction of patients by systems. The Results of the focus group research has established the hypothesis about that health reforms are more successful if bribing and corruption is already defeated in the country. The surprising facts about effectiveness of own national health financing and health management approaches, even if they are very courageous without analogs are discussed in the article.

**Ref: 293 Oral**

Transforming economics for health

Presenting author: **Judith Emanuel**

Steady State Manchester, 17 Woodlawn Court, Manchester, M16 9rh, United Kingdom.

Co-authors: Colin Cox, Prof Mark Burton

(This proposed paper is a case study focussing on engaging critically with public health practice not primary research so it is not written in experimental format) Do aggregate economic growth and a culture of consumption support population health and well-being? Can they deliver more equitable health? A growing body of literature (including Hanlon et al, Rayner & Lang) argues that the major risk to long term population health is now climate change and that new public health and economic paradigms are urgently needed in order to minimise its impacts. How can Public Health capitalise on its history and strengths in successfully transforming policy and societal norms in the face of pressures to support economic growth? What can Steady State approaches offer? This session will consider what Steady State Manchester (SSM) can offer in relation to this debate. SSM is a lay organisation which has developed a practical and feasible local approach to building a society where people can live well, more equitably and with an economy mindful of the need to ensure growth is not at the expense of planetary limits. It draws on the insights of: - ecological economics (the steady state economy), - the degrowth movement (the society of frugal abundance) - the rethinking of prosperity and well-being by social movements in the majority world (vivir bien, and de-colonising perspectives) - eco-feminism (the subsistence perspective) - tools for promoting equitable and sustainable development (doughnut economics). The group has engaged individuals and organisations in considering the possibilities of this model including the City Council, NGOs and social movement organisations. Currently the group is working with councillors and officers to look at how the city might develop its systems of food supply as a sustainable economic issue, while increasing local prosperity and resilience. Should professional and academic public health be embracing this type of economics and way of working? If so how should it inform this type of work and be informed by it?

## Ref: 255 Oral

Commuting to work and to school in Italian large urban areas: a health economic assessment of cycling promotion

Presenting author: **Cristina Taddei - Specialization School of Hygiene and Preventive Medicine, University of Florence (Italy)**

Specialization School of Hygiene and Preventive Medicine, University of Florence (Italy), Department of Health Sciences, University of Florence, viale Morgagni 48, 50145 Florence (Italy), Italy.

Co-authors: Giorgio Garofalo - Department of Prevention, Florence Local Health Authority (Italy); Chiara Lorini - Department of Health Sciences, University of Florence (Italy); Andrea Vannucci - Regional Health Agency of Tuscany (Italy); Giuseppe Petrioli - Department

Aims To promote a modal shift toward cycling among students and workers in Italian urban areas. Design To evaluate the health and economic impact of cycling promotion, we carried out a health economic assessment considering incidence reduction of type 2 diabetes, acute myocardial infarction (AMI), stroke, and savings on healthcare direct costs. Setting The study covered all Italian urban areas with more than 150,000 residents (24 cities). These 24 cities were divided into three groups according to their territorial conformation: flat (19 cities), flat/hilly (3 cities), hilly (2 cities). According to the Italian National Institute of Statistics' data in Italian large urban areas only 2.1% of individuals going to work/school use a bicycle, with wide geographical differences: the percentage of regular commuter cyclists is less than 1% in 11 cities (mainly in the southern regions) and is more than 10% only in 2 cities of the north. This is the case even for short distances: for transfers to work/school of up to 30 minutes 47.5% of people use a car, 10.9% use a moped and 2.6% use a bicycle. To evaluate cycling promotion we carried out a scenario analysis making the assumption that in the case of flat cities people using a car or a moped going to work/school would switch to a bicycle in a percentage of 10-30% if the transfer is less than 15 minutes, and of 3-10% if the transfer is between 16-30 minutes. In the case of flat/hilly cities we made a more conservative assumption: people would switch to a bicycle in a percentage of 5-15% and of 1-5% if the transfer is less than 15 minutes and between 16-30 minutes, respectively. The 2 hilly cities were excluded from the scenario analysis because of their geographical conformation that is not indicated for cycling promotion. Results Over a ten-year period, the 105,280 individuals that are already regularly cycling in Italian urban areas let us prevent 2160 cases of type 2 diabetes (sensitivity analysis: 1440-2880), 393 cases of AMI (262-524), and 392 cases of stroke (261-522). The corresponding savings from the public healthcare payer's perspective are estimated to amount to 35,718,706 EUR (23,812,470-47,624,941) discounted by 5% per year. According to our scenario analysis, the cycling promotion strategy results in 133,802-412,525 additional individuals regularly cycling (worst and best scenario, respectively). Over 10 years, the number of cases that can be prevented by such an increase in cycling is 2169-6566 for type 2 diabetes, 474-1385 for AMI, and 473-1381 for stroke resulting in 5% discounted savings on healthcare direct costs of 21,073,210-61,973,466 EUR (worst and best scenario, respectively). Conclusions In Italy the

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majority of individuals going to work or to school use a car or a moped even for short distances. Study results show that a modal shift toward bicycle among students

and workers does indeed improve health, may be economically convenient and may contribute to reduce health inequalities.

Ref: 365 Oral

Management Model of the Brazilian Health Ministry

Presenting author: **Luciana Assis Costa**

Universidade Federal de Minas Gerais, Avenida Presidente Antônio Carlos, 6627 - Ventosa, Belo Horizonte - MG, cep - 31270-901, Brazil.

Co-authors: Daniete Fernandes Rocha; Jorge Alexandre Barbosa Neves

This paper propounds an analysis of the political-bureaucratic structure of national health policy formulation and coordination in Brazil, since the implementation of the National Health System (SUS). For that, it seeks to analyze the Ministry of Health in its competency as the SUS management agency, emphasizing the organizational structure, specially the composition of the administrative staff, forms of its recruitment and internal promotion. This is a descriptive cross-sectional qualitative study conducted in the 1990-2012 period. The data collection instruments were semi-structured interviews conducted with those who hold technical and technical / political position in that Ministry and in some administrative bodies, as well as research in documents. To discuss the possible ways for the bureaucracy to modernize itself in democracy, a classic theme from the perspective of Max Weber is revisited in the field of public policy, particularly in the area of public administration. In this sense, the great contemporary challenge to the state, and therefore to the model of bureaucratic organization, is related to the new institutional designs that come with the process of democratization that require a readjustment in order to build a model of rational-legal domination that legitimizes itself by a balance between insulation and social insertion. Although the SUS is implemented in a decentralized manner, with a strong emphasis in municipalities, reserving to the mechanisms of social participation a space of deliberation and control of health policies, the role of formulating and coordinating the national health policy remains under the responsibility of the Ministry of Health's bureaucracy. The research revealed that the Ministry of Health presents a weak bureaucratic structure, in which the recruitment by selection process indispensable condition for a meritocratic bureaucracy didn't constituted a hegemonic form of composition of the administrative staff until 2009. The data demonstrate that the lower levels commissioned functions, together with the extra-remunerated functions, work as incentive mechanisms to career employees of the Ministry. The high level staff, however, assumes feature of recruitment by a political nature appointment, such as the secretary, the coordination and the direction, and generally are directed to external employees. A climate of tension and competition among career employees of the Ministry of Health and external staff is caused by the lack of mechanisms to promote internal employees, associated with filling almost exclusively the commissioned positions of leadership by professionals with no ties to the state. In conclusion, one can say that the central management of the Ministry of Health does not have a modern reference of career, which could effectively enhance its human resources and could be a mainstay in the continuity of its policies and actions.

## Exchange 4

11:00

### World Health

**Session title** Improving the lives of urban citizens through novel approaches

**Chair** Dr Christopher Birt

### Ref: 798 Oral

Conceptualising Health Systems: The experience of 'real' health systems in an urban informal settlement in northern Nigeria

Presenting author: **Muhammad Saddiq**

University of Sheffield, School of Health and Related Research, University of Sheffield, Regent Court, 30 Regent Street, Sheffield, S1 4DA, United Kingdom.

Co-authors: Amy Barnes, Graham Jones, Julie Balen, Janet Harris

Authour Request: Not for Publication

**Ref: 246 Oral**

**Disaster induced Migration and Social Conflict at Urban Slums: An Enquiry in the Light of Cyclone Sidr in Bangladesh**

**Presenting author: Bashir Ahmed**

Jahangirnagar University, Bangladesh, Jahangirnagar University, Bangladesh, Bangladesh.

**Co-authors: Mohamamid Tarikul Islam**

Conflict induced internal displacement has been a burning problem worldwide as a result of increasing disaster due to climate change. Disaster induced migration has the potential to become a phenomenon of a scale and scope not experienced in human memory. Displacement due to disaster is considered to be a socio-economic and political problem, when it gets solved, the issue of displacement is also ignored. Bangladesh was struck by a category-4 cyclone (Sidr) on the evening of 15 November in 2007 which resulted in displacement of 650,000 people. Such migration posed a serious threat towards social stability and leads towards social conflict. Migration is generally considered as a source of social conflict. Over 3 million people live in slums and squatters of Dhaka city with very little utility service. Slums and squatters are the informal settlements of Dhaka city that accommodate the low-income group of people. Conflict (quarrel, clash, fight) in the slums and squatters is a regular phenomenon. The displaced persons are knowingly and unknowingly discriminated on various grounds and suffer as the survivors of various stigmas. The study reveals that, undue influence by the muscleman, discrimination between migrated and poor slum dwellers, and demand for money by the terrorist group, ignorance to the migrated people by the different quarters and sexual harassment to the migrated adolescent girls are responsible for slumping of social conflict. Their voices are ignored, their pleas are neglected and thus they are excluded from the mainstreamed section in the society.

**Ref: 315 Oral**

Role of Nurses in Maternal and Neonatal Health Care Programmes in Bangladesh

Presenting author: **Dalia Momtaz**

International Centre for Diarrheal Disease Research ,Bangladesh (icddr,b) Mohakhali,Dhaka ,Bangladesh, Centre for Reproductive Health , icddr,b ,Mohakhali ,Dhaka Bangladesh, Bangladesh.

Co-authors: Dr. Md . Abdul Quaiyum

**Aim:** The nurses have the potentials to contribute for country's maternal and neonatal health care. We know little about their competence to manage common life-threatening obstetric complications .We assessed the level of knowledge, skills and confidence of nurses and compare them in different urban settings in provision of maternal and neonatal health care services (MNH) as envisioned in WHO/FIGO/ICM definitions of a skilled birth attendant as a basis of initiating quality improvement.

**Setting:** The study was conducted during January to June 2008 in two Government settings, Khulna and Sylhet districts in Bangladesh as there was a full range of government and private hospitals to provide basic and comprehensive emergency obstetric services (EOC) **Design:** A written knowledge test and a skills test based on clinical models / dummy patients for all existing staff nurses of these facilities. An Observational Normal vaginal delivery was also observed. A total of 50 multiple choice questions included maternal and neonatal knowledge component: antenatal care, labor and delivery following aseptic techniques, family planning and post natal counseling, newborn care and resuscitation, use of partograph (used to record all observations of a woman in labor), a structured skills checklist included antenatal care, normal labor, childbirth and immediate newborn care, postnatal care newborn resuscitation and two case studies: management of PPH and manual removal of placenta. **Participants:** We conducted skill and knowledge test of nurses who were existing in the obstetric wards of district hospital, upazila and medical college hospital both at Khulna and Sylhet district in Bangladesh We tested a purposive sample of 109 nurses from Khulna and from Sylhet 45 nurses were participated in skill and knowledge test. During the study period they were available and willing to participate. **Results:** Knowledge test: The result shows that overall percent mean knowledge of Sylhet group is 53% and 52% for Khulna group. Both the nurses of Khulna and Sylhet had lack of knowledge on partograph. Skills test: The overall percent mean skills test score of Sylhet was 33 % and for Khulna mean skills test score was 40% Both the two groups of nurses demonstrated inadequate skills in managing life-threatening complications. Among nurses of Sylhet the percent mean test score on newborn care and resuscitation was 29% and for Khulna mean score was 33%. Both the two district's nurses were unable to perform all the steps of PPH management and unable to perform the procedure of manual removal of placenta. Percent mean skills scores on 'case study on PPH management' were 34% in Sylhet and for Khulna it was 42%. **Conclusion:** Knowledge and skills of nurses from both study area of urban settings are seemed to be below the standards and a wide gap between current evidence based standards and provider competence to manage selected obstetric and neonatal complications. We discuss the significance of that gap, suggest approaches to close it to utilize the nurses' midwifery skill to improve maternal and neonatal health programme in Bangladesh.

Ref: 779 Oral

Health Care Actions during and after the wars: the Italian Case. Notes and Research Perspectives

Presenting author: **Ugo Pavan Dalla Torre**

Co-authors:

Ugo Pavan Dalla Torre, Via Mussato, 26 Abano Terme, Italy.

The First World War was a terrible conflict. Italy had to preserve the health of soldiers and of the citizen near the front-line, in particular from tuberculosis and malaria. Lots of soldiers became permanently invalid and Italian Governments had to build up a new welfare system to protect and to cure them.

Research questions: 1) What were the health care actions done during and after the war to preserve the public health? During the World War I, Italian Army had to choose soldiers. Military doctors made lots of examinations trying to recognise illnesses like tuberculosis or malaria. Then the Army had to protect the citizens. In the documents of the Italian National Archive it is possible to read the actions done in those years, like the distribution of the quinine, an anti-malaria treatment. There was another problem to solve: the soldiers become permanently invalid that had to be cured. In 1917, the Italian Parliament established the Italian Agency for the Protection of the Disabled Ex-Servicemen (ONIG) [law n. 481, 25 march 1917]. In the same year was founded the Italian National Association between Disabled Ex-Servicemen (ANMIG) a private Association. This Association aimed to represent the Veterans' interests. After the war ONIG continued its activities. Fascist regime continued the health care politics but history of ONIG has not been written yet. 2) Is it possible to see an Italian way to the welfare? What were its characteristics? I think that the Italian welfare system, born before the World War I but developed and improved during the war; had both the public intervention and the private one. For the Disabled Ex-Servicemen there was a public Office (ONIG) and a private Association (ANMIG), and the same was done for the Veterans: Italian National Agency for Veterans (ONC) and Italian National Association between Veterans (ANC). This double organisation is still visible in the Italian welfare system. It is a system in which the public health care actions are completed by private, Associations or Cooperatives. 3) Did the war increase the health preventions? Surely the war gave an important contribute to the Italian public health politics: for the first time Italy had to confront with an health emergency. Starting from the World War I there was a reorganisation of the health care actions in Italy. 4) What was the role of the invalid soldiers during the fascism? And what was the role of the fascism in the cure of those citizen? Fascism needed crippled soldiers, so it continued the health care action for the Disabled Ex-Servicemen and in 1923 approved the reform of the war-pensions. 5) What kind of assistance did Republic suggest? Is the republican path different from liberal one? 6) Did the military assistance have some effects on the civilian? Surely the assistance to invalid soldiers had a good effect for the assistance to other disabled. The Institutes built during and after the war were used also by civilian.

**Ref: 467 Oral**

Mortality Rate of Primary Care Sensitive Conditions in Macro-West Health of Minas Gerais State, Brazil.

Presenting author: **Prof Claudia Di Lorenzo Oliveira**

Federal University of Sao Joao del-rei

Co-authors: Helena Ferreira Henriques, Clareci da Silva Cardoso, Mario Ernesto Piscoya Diaz, Veneza Berenice de Oliveira.

Objective: Analyze mortality rates of Primary Health Care Sensitive Conditions (PHCSC) of the 55 municipalities of the Health Western Macro-Region of Minas Gerais in 2000 and 2007. Method: This is an ecological study, whose aggregation unit was the municipality. We analyzed the mortality rates for specific PHCSC, lethality and mortality proportional PHCSC occurred in persons ranging 0-79 years. The selection of PHCSC was based on the Brazilian list. We calculated the difference between the mortalities PHCSC and proportional distribution by gender. The Student T test was used to assess differences between averages. Standardization by indirect method was made based on the year 2000 and the proportional mortality rate by age group and their confidence intervals was calculated. Results: The results of this study point to a reduction in mortality rate due to PHCSC in 50% of the micro-regions, but significant in only one of them. Concerning lethality an increase in all the regions was recorded. After adjustment only the male group under 1 year increased significantly, that is, an excess of deaths not explained by demographic variation in the years studied. Conclusion: The data indicate that late admission of the PHCSC in tertiary care may be occurring, as well as the presence of precocious deaths, which suggests a likely inability of primary care to identify and prevent avoidable deaths.

## Exchange 4

### A Perspective from Fresh Minds

Session title ABSTRACT PRESENTATIONS

Chair Mr Daniel Mills and Miss Olivia George

### Ref: 705 Oral

Clinical Aspects of Diabetes Mellitus and its Complications

Presenting author: **Daniel Mills**

The University of Manchester, The University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom.

Co-authors:

Diabetes is a hugely prevalent disease which has a rising global incidence. Over the coming years dealing with this is set to be one of the main challenges in world medicine and a huge burden on health services across the globe, including the NHS here in the UK. Diabetes is the inability to lower blood glucose levels leading to chronic hyperglycaemia in the untreated patient. It is split into two broad categories, type 1 and type 2; Type 1 being the absence of insulin and its action, Type 2 is a continuum between differing degrees of insulin resistance and loss. All forms of diabetes can cause multiple problems for the patient, both directly and through complications of this deregulation of blood glucose. Directly, hypoglycaemia and the hyperglycaemic states of ketoacidosis or hyperosmolar hyperglycaemic state are medical emergencies. Complications of diabetes are split into the macrovascular calcification and atherosclerosis of large vessels and microvascular disease of the nerves, eyes and kidneys. These complications can cause both morbidity and mortality. One of the areas left most vulnerable by these complications is the feet. Diabetic feet often become ulcerated infected and require amputation which the case study discussed will show.

## Ref: 706 Oral

Anti-NMDA receptor limbic encephalitis; a case report and literature review

Presenting author: **Daniel Mills**

The University of Manchester, The University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom.

Co-authors:

The Limbic system is made up of several different well connected areas of the brain. It plays an important role in our emotions, behaviour and production of new memories. Limbic encephalitis is inflammation of the limbic system caused by antibodies. This causes dysfunction of the limbic system producing a variety of associated symptoms. The antibodies were originally thought to only be present as part of a paraneoplastic disease but more recently a new group of antibodies have been discovered and these can often present without underlying malignancy. NMDA encephalitis is one of these. Antibodies against the cell surface NMDA glutamate receptor are produced which stop it from functioning. This leads to the classical symptoms of psychosis, amnesia and dyskinesia. Alongside this clinical picture investigations can be used to aid diagnosis, these include; hyperintensity on MRI, EEG slowing and seizure activity and CSF abnormalities including the presence of anti-NMDA receptor antibodies. Once diagnosed it is important to begin treatment. This is an area of ongoing research but a general consensus around what treatments to use is being made. Although a potentially lethal disease the majority of patients receiving treatment recover and have the unpleasant symptoms reversed.

**Ref: 715 Oral**

Can the engagement of systemic mastocytosis sufferers with their own condition lead to improved outcomes in terms of management and treatment of this debilitating disease?

Presenting author: **Olivia George**

University of Manchester, 78 Century Buildings, St Mary's Parsonage, Manchester, M3 2DE, United Kingdom.

Co-authors:

Authour Request: Not for Publication

**Ref: 733 Oral**

Is there a right to die in England?

**Presenting author: Arunan Jothieswaran**

University of Manchester, University of Manchester, Manchester, M13 9PL, United Kingdom.

Co-authors:

There are many facets to this topic, which is whether we actually have a right to die and if we don't have that right, it is about whether we should be given that right. After clearly defining what is a right and where they originate from, we should examine to see if there is an actual right to die. Though suicide has been decriminalised, there is no particular right to die in England. This has a drastic effect on assisted death and euthanasia as we need such a right in order to have access to either or. Thus we have to discuss the relevance of having it in England and the cases that have been tried in courts to change such laws, the pros and cons of assisted suicide, how we would hope to implement it as well the thoughts of both the layman and medical professionals. It is also important to look over the Liverpool Care Pathway and see if it is sufficient to meet the needs of everyone. We also have to see how such a procedure can be drafted using other Acts and countries as references. Only then can we make a stand and it is clearly demonstrated that though there may be concerns about how it will be instated, with proper monitoring, we need to have this right due to the strong support and need for it.

## Exchange 5

12:40

### A Perspective from Fresh Minds

Session title ABSTRACT PRESENTATIONS

Chair Miss Sumayyah Mian

Ref: 737 Oral

Is current guidance on sun exposure sufficient?

Presenting author: **Sadzia Khan**

The University of Manchester, Flat 4 Velvet House, 60 Sackville Street, Manchester M13WE, United Kingdom.

**Aim:** To evaluate if current recommendations on skin cancer and vitamin D given to the general public are suitable. **Background:** The incidence of skin cancer is continually increasing. Unlike other cancers, it begins presenting at a younger age and those who are white Caucasian are at a higher risk. Ultraviolet radiation (UVR) emitted by the sun is the main risk factor. UVR reaching the earth's surface comprises of UVA and UVB. UVB plays a greater carcinogenic role (1). On the other side of the coin UVB is responsible for a number of roles, the best documented being on bone health. The predominant source of vitamin D in the human body is also through the actions of UVB on the skin. There is some emerging evidence that vitamin D may possibly protect against skin cancer (2). This adds further to the already confusing dilemma of harnessing the benefits from the sun whilst minimising the risks. **Conclusion:** Skin cancer has no signs of abating. If current trends continue, rates of skin cancer will escalate as will the associated health burden and difficulty in managing that. Thus, messages conveyed to the public need to include the following points: sunlight exposure needs to be limited to reduce the escalating incidence of skin cancer, while allowing some exposure to obtain our vitamin D needs. Currently, there is no strong evidence for photoprotection of skin cancer by vitamin D and the amount of vitamin D needed to achieve a protective effect against skin cancer is unknown. Research is continuing to address the balance and risk to sunlight exposure for assessment by the Department of Health committees. Early detection and sensible exposure to UVR remain important in decreasing the associated mortality and morbidity. Sun burn should be avoided to attain vitamin D due to the risk of skin carcinogenesis. Equally health messages need to be targeted to specific populations as one message cannot be adequate for everyone due to multifactorial nature of skin cancer and vitamin D synthesis. **Recommendations:** Much has been done to raise the awareness of the damaging effects of the sun. However, public health campaigns tend to be aimed towards white Caucasian populations; whereas skin cancer is also reported in darker skinned people, who have a worse prognosis. Public health education would decrease the associated mortality and morbidity. Greater emphasis needs to be made on the avoidance of sunbeds, sunburn and appropriate use of sunscreen in children and adults. This could be done through supplementary teaching sessions in schools and communities and through distribution of leaflets.

## Ref: 636 Oral

Therapeutic hypothermia: the underused weapon in the arsenal against hypoxic brain injury after cardiac arrest

Presenting author: **Danielle Cowlin BSc (Hons)**

University of Manchester, Royal Preston Hospital, United Kingdom.

**Introduction:** Sudden cardiac arrest is the leading cause of death in Europe. In those that do survive, permanent disability caused by hypoxic brain injury is a common devastating consequence for patients and carers, imposing substantial financial burden due to loss of life-years and rehabilitation costs.

**Therapeutic hypothermia** - an intentional reduction in a patient's core body temperature to 32-35°C - is one intervention in an arsenal of strategies used, in an attempt to improve survival and neurological outcome after out-of-hospital cardiac arrest. It has been shown to reduce both the initial ischaemic brain injury and the subsequent reperfusion injury, but is currently being underused.

**Case Description:** A 52 year old Caucasian female was admitted into the Emergency Department with a Glasgow Coma Score of 3, following an unwitnessed collapse. She was making no respiratory effort and was in cardiac arrest. The paramedics had administered 5 cycles of cardiopulmonary resuscitation (CPR) prior to arrival. In the emergency department CPR continued, and after 2 minutes there was return of spontaneous circulation. Collateral history from family revealed the patient was normally independent, fit and well. She had no known cardiovascular disease or significant risk factors, and was not on any regular medications. It was agreed that despite the unknown length of time from collapse to start of CPR, the patient met all other criteria and was a candidate for therapeutic hypothermia treatment. Cooling with icepacks and fluids was immediately commenced in the emergency department, before transferring her to Critical Care. The target core body temperature of 33°C was quickly reached, using intravenous cooled fluids, and cooling blankets. Re-warming was commenced as per protocol approximately 24 hours later. Investigations carried out to determine the cause for the cardiac arrest included a brain CT (computed tomography) scan and blood electrolytes which revealed no acute abnormalities. However, abnormal Electrocardiogram (ECG), Echocardiogram and Troponin T results showed cardiac damage, and some possibility of an accessory electrical pathway potentially causing arrhythmia, and then myocardial infarction.

**Results:** Unfortunately the patient did not improve neurologically, and on day 8 agreement was reached for treatment to be withdrawn. It was concluded that the hypoxic brain injury sustained prior to commencing CPR was too great on this occasion.

**Discussion:** Whist this particular case is not a compelling example, mounting evidence suggests that Therapeutic Hypothermia treatment in the first few hours after cardiac arrest, can increase survival, decrease hypoxic brain injury and improve neurological outcome considerably. It can be instigated quickly and efficiently in the emergency department, and then continued in critical care. This treatment is indicated for adult comatose patients who have suffered an out-of-hospital cardiac arrest, caused by ventricular fibrillation or pulseless ventricular tachycardia, and who have return of spontaneous circulation within 60 minutes. It should be

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widely available and embraced by appropriately trained physicians. Further work is required to determine the benefits of use with in-hospital cardiac arrests.

### **Ref: 601 Oral**

Reducing Cervical Cancer Incidence & Mortality: Creating an Evidence Based Index for Cervical Screening Policy in the EU

Presenting author: **Sumayyah Mian**

University of Manchester, 1 Brooks Rd, Manchester, M16 9QW, United Kingdom.

Co-authors: Sumayyah Mian, Dr Arpana Verma

Authour Request: Not for Publication

**Ref: 608 Oral**

Should All Infants Born Before 24 Weeks Gestation Be Resuscitated?

Presenting author: **Dillon Horth**

Manchester Medical School, Manchester Royal Infirmary, Oxford Rd, Manchester, Greater Manchester M13 9WL, United Kingdom.

**Abstract** Introduction Babies born under 24 weeks gestation are on the borderline of viability. Infants this young often face immediate life threatening problems, and if they survive will almost inevitably live with significant disability. Knowing this, the question becomes whether it is ethical to resuscitate and provide lifesaving treatment to babies born under 24 weeks gestation. Methods The following databases were searched to acquire the supporting literature for this dissertation: Ovid Medline, Ovid Embase, Google Scholar, Knowledge Network, Cochrane Library, Web of Science, PubMed, and SciVerse. Key words included: extremely premature birth, premature birth, resource rationing, cost-effectiveness, risk factors, outcomes of extremely premature birth, medical ethics, autonomy, beneficence, non-maleficence, justice, medical advances in neonatology, complications of birth and screening. Selection criteria were applied to narrow the results. Discussion In order to determine whether medical intervention is ethically acceptable in children born below 24 weeks gestation, I look at several important aspects relating to preterm birth. Using the exact rates of disability and survival in babies under 24 weeks, I try to determine how much good we are actually doing by treating such young neonates. The ethical concepts of beneficence, non-maleficence, justice and autonomy are essential components of this report and are discussed in detail. Additionally, it focuses on the associated financial, physical, and emotional burdens placed on parents and highlights the financial burden on the NHS. Two case studies are used throughout the paper to highlight and enforce key points. Since extremely premature birth is already a prevalent problem with a rising incidence across the world, how it is handled in several countries across Europe is also discussed. A brief overview of the risk factors for extremely premature birth is provided and I assess whether or not a screening program would be beneficial and effective in helping to reduce the rates of preterm birth. Conclusion I conclude that the aggressive management and resuscitation of babies born under 24 weeks gestation should not be the standard of care, particularly if the only reason for resuscitation is parental influence and an uncertain prognosis.

## Exchange 6

12:40

### World Health

Session title ABSTRACT PRESENTATIONS

Chair Dr Steven van de Vijver

Ref: 424 Oral

Title: Does maternal healthcare expenditure cause impoverishment? Insights from interstate variation in urban parts of India

Presenting author: Saradiya Mukherjee

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**Background and Objectives:** Cost of maternal health care services has been explored by many studies. It has been documented that in many cases, when costs are high, households in India have to even borrow and sell the assets to cover their health costs. Studies reported that both public and private health care sector were inefficient in providing universal affordable quality health services in India. There are series of evidences suggesting significant rise in household out of pocket expenditure on health care in India. Some evidence further shows that out of pocket expenditure (OOP) is one of the key factors pushing households in to poverty. Since health is a state subject in India whereby plans and policies regarding health care services vary across the country, it is usual to expect that there might be variation in the pattern which can be captured only by a study of inter-state variation. Hence, against this background the study aims to examine the interstate variation in OOP expenditure and impoverishment induced by OOP on maternity in urban parts of India. **Data:** The study uses data from 25th schedule of 60th round (January-June 2004) of the National Sample Survey (NSS) on Morbidity, Health care and Condition of Aged. **Methods:** Total maternal expenditure is calculated by adding total OOP expenditure on antenatal care, delivery and postnatal care. Impoverishment due to maternal health expenditure is computed by treating the households which fall below poverty line after paying for maternal health care, as poor. Finally, maps were prepared for urban India to mark the interstate variation in maternal health care induced poverty headcount. **Results:** Using methods discussed above, we calculated pre and post maternal health care expenditure induced poverty head counts urban areas of 16 major states of India. Results showed that OOP expenditure is positively associated with impoverishment. States with higher OOP expenditure on maternity are highly vulnerable to impoverishment. States with higher OOP experienced increase in poverty head counts after paying for maternity. The expenditure on maternity care is highest in Kerala while Orissa spends least on maternity care. And as result, the poverty headcount had increased to 46.5 percent in Kerala after paying for maternity, whereas in Orissa, it has increased to only 10.2 percent. Similarly, in the states like Bihar, Uttar Pradesh, and Rajasthan with lower OOP

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expenditure on maternity experienced lesser increase in post maternity payments induced poverty head counts. Conclusion: It is seen that that the states which are not high focus states for policy makers or are

better performing states in terms of maternal health indicators, pushed into poverty after paying for maternal healthcare. Janani Suraskha Yojana (launched in 2005) which provides cash assistance for institutional delivery to poor performing states of India seem not sufficient as the cash assistance is less than the actual OOP expenditure.

## Ref: 249 Oral

Challenges of research and implementation of health programs in slums: experiences from the SCALE UP study.

Presenting author: **Steven van de Vijver**

African Population and Health Research Center, APHRC Campus, PO Box 10787-00100, Nairobi, Kenya, Kenya.

Co-authors: Samuel Oti, Clement Oduor, Charles Agyemang, Joep Lange, Catherine Kyobutungi

**Introduction:** Since 2007, the majority of the global population lives in urban settings. Of all regions, sub-Saharan Africa (SSA) is the least urbanized but has the highest rate of urbanization. Urban growth rate is almost double the rural rate, but more significantly, slum growth rate is higher than the overall urban rate. As a result as much as 60% of the urban population in SSA lives in slums - characterized by extreme poverty and poor health and other social outcomes. In the recent past, attention has shifted to the urban poor as a marginalized group and the new face of poverty in the region and several initiatives and programs have been launched to improve the lives of slum dwellers all over the world. Research in slum settings is critical therefore, not only to document the challenges therein but to support programmatic actions. Until now not much is documented on how to implement research or programs in these dynamic and deprived settings or on the challenges that one might encounter in the process. **Aim:** This paper documents the experiences during the implementation of a large-scale project in two Nairobi slums. The aim is to describe the challenges of research and implementation of health programs in slums settings, as well as the enabling factors and possible solutions to address them. **Setting:** The African Population and Health Research Center (APHRC) has more than ten years' experience conducting research and implementing programs in the slums of Nairobi and other cities in Kenya. This paper is based on experiences from one such program: the SCALE-UP study, a community based cardiovascular disease prevention program for the urban poor that is being implemented in the two slums of Korogocho and Viwandani. **Results:** The key challenges for health researchers and programmers in slum settings include grinding poverty, insecurity, lack of infrastructure, a high burden of disease, high population mobility, lack of social cohesion and limited sense of community, local politics and attrition of human resources. These eight challenges are closely interlinked with poverty playing a central role. Some of the successful approaches used to mitigate these challenges include effective community sensitization throughout the project, recruiting staff from the project communities, use of local security structures, involvement of a diverse group of community leaders and stakeholders, community engagement based on values and principles that are consistently applied throughout the project, demonstrating the value of the institution to the community's needs beyond a single project. **Conclusion:** Slums are complex environments where residents have multiple competing priorities and therefore projects are not always perceived as being beneficial, especially in the short term. On the other hand there is a strong need for improvement in the slums so with the right approach research and project implementation can be highly rewarding.

## Ref: 117 Oral

Low social support and 16-years risk of cardiovascular diseases depending on social status in Russian female population aged 25-64 years

Presenting author: **Dmitriy Panov**

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Co-authors: Valery Gafarov, Elena Gromova, Igor Gagulin, Almira Gafarova

Objective: To explore the influence of social support (SS) on relative risk of an arterial hypertension (AH), myocardial infarction (MI) and stroke in female population of 25-64 years over 16 years in Russia.

Methods: Under the third screening of the WHO "MONICA-psychosocial" (MOPSY) program random representative sample of women aged 25-64 years (n=870) were surveyed in Novosibirsk. Berkman-Sym test was used to measure indices of close contacts (ICC) and social network (SNI). From 1995 to 2010 women were followed for the incidence of AH, MI and stroke. Cox proportional regression was used for hazard ratio (HR) assessment. Results: The prevalence of low SS in women aged 25-64 years was 57% and 77.7% for low ICC and low SNI, respectively. HR of AH over the first 5 and 10 years of study were 2.01-fold (95.0%CI:1.025-3.938; p<0.05) and 1.93-fold higher (95.0%CI:1.138-3.261; p<0.05) in women with low ICC compared to those with higher levels of ICC, respectively and by the end of follow-up it was 1.42 (95.0%CI:1.138-3.261; p<0.05) in persons with low ICC. HR of AH in women with low SNI were 1.88 (95.0%CI:1.090-3.255; p<0.05) and 1.58 (95.0%CI:1.110-2.274; p<0.01), for 10 and 16 years respectively. HR of MI over 16 years of follow-up were in 4.9-fold (95.0%CI:1.108-21.762; p<0.05) and 2.9-fold (95.0%CI:1.040-8.208; p<0.05) higher for low ICC and SNI, respectively compared those with higher levels of SS. Risk of stroke over 16 years was 4.1 (95.0%CI:1.193-14.055; p<0.05) and 2.7 (95.0%CI:1,094-6,763; p<0.05) in women with low ICC and SNI, respectively. Married women with low ICC more likely to develop AH and stroke compared to unmarried ones with higher ICC (p for all <0.05). Higher AH rate was in easy physical laborers with low SNI and stroke more likely developed in 'hard physical worker' with low ICC and SNI (p for all <0.05). There was tendency of increasing MI rates in 'executives' with low SS. Conclusion: There is high prevalence of low SS in Russian women aged 25-64 years. Low SS significantly increases risks of AH, MI and stroke especially in married women in 'manual' and 'executives' occupational class.

## Ref: 173 Oral

Emerging health and social issues in developing countries: a case study of gambling and drink driving in Uganda

Presenting author: **Daniel Darbyshire**

Kitovu Hospital, Masaka, Uganda.

**Title:** Emerging health and social issues in developing countries: a case study of gambling and drink driving in Uganda **Author:** Dr. Daniel Darbyshire MBBS MRCS PGDip (MedEd) FHEA, Volunteer Surgical Officer, Kitovu Hospital, Masaka, Uganda **Background** Emerging health and social issues in developing countries reflect a variety of phenomena; ongoing poverty, often extreme in nature, rapid development and urbanisation with subsequent widening of the rich-poor divide. Some of the consequences of which have a growing research base in developing countries, for example obesity and cardiovascular disease. Other important issues are starting to emerge and this paper aims to discuss two of these aiming to put them in context in terms of health impact and challenges to development. I focus on gambling and drink driving in Uganda. **Methods:** Review of the literature, popular press and government policy performed to contextualise the issues. **Results:** Uganda is one of the worst places in the world in terms of road traffic deaths and has one of the highest per capital consumption of alcohol in the world. Alcohol may be implicated in many of the deaths but data is lacking. Political will and public pressure for change appear to exist but are being hampered by industry influence, corruption and a lack of understanding of what leads people to drink and drive. What evidence there is suggests that social norms are paramount and may supersede legislation in terms of influence. The gambling industry in Uganda is rapidly growing, but there is emerging evidence that little of the revenue is reaching central government in taxes, with much lost abroad or not declared. Multiple media reports pertaining to the individual and societal effects of gambling in Uganda are beginning to emerge but as yet no specific research has been performed. Research from other countries suggests that liberalisation of alcohol policy increases related social and personal pathology, that youth gambling is a particular area of concern and that more at risk gamblers come from the urban poor than rural poor demographic. **Conclusion:** Drink driving and gambling are problems in Uganda as they are in much, if not all, of the world. Research, conducted predominantly in developed countries, points towards possible solutions. Research conducted locally is much needed as development and urbanisation meets the countries existing social and economic problems head on. A public health approach, starting with research to try to better understand the problem, is likely to make good economic sense for the country in the long run.

## Exchange 7

12.40

### Health Promotion / Health Equity, Inequalities and Disparities

Session title ABSTRACT PRESENTATIONS

Chair Tom Liptrot

#### Ref: 515 Oral

Comorbidity and outcomes among cancer patients in the North West of England

Presenting author: **Tom Liptrot**

The Christie NHS Foundation Trust, Wilmslow Road, Manchester, M20 4BX, United Kingdom.

Co-authors: Livsey JE, Wilson B, Barker-Hewitt M, O'Hara C

**Background** Understanding comorbidity in cancer patients is important to ensure patients receive the most appropriate treatment and best possible outcome and also that adequate support services are available for cancer survivors post-treatment. Cancer patients report significantly more comorbid conditions compared with non-cancer patients and negative associations are most pronounced in those with two or more (Smith et al 2008). In addition, survival of cancer populations decreases as the burden of comorbidity increases (Piccirillo et al 2004). Mechanisms underpinning the comorbidity-outcomes relationship are less well understood (Geraci et al 2005). How does comorbidity decrease survival? Does it affect stage at diagnosis or treatment response? Does cancer or treatment increase comorbidity? We present here an insight into comorbidity among patients of the Christie NHS Foundation Trust, a specialist cancer centre in the North West of England. Comorbidity is routinely recorded as part of our new web-based clinical data system. We describe here variation in comorbidity and its impact on outcomes.

**Methods** We identified comorbidity among newly referred patients diagnosed with non-small cell lung, breast, vulva and cervical cancer between January 2012 and September 2013 (N = 4480). Comorbidity was scored using the ACE 27 index; patients were allocated a total score and characterised by comorbidity type. We tested for associations between comorbidity score/type and patient characteristics including age, sex, cancer type, stage, IMD deprivation index and treatment. We also tested for differences in outcomes between patients characterised by comorbidity. Results Across all four cancers, 44% of patients had no comorbidity, 33% mild comorbidity, 15% moderate and 8% severe. Lung patients had the most comorbidity, 43% having moderate or severe scores. Cardiovascular was the most common type (36% of patients). Amongst lung and breast patients, older people were more likely to have moderate or severe comorbidity ( $p < 0.0001$ ) as were patients from more deprived areas ( $p < 0.0001$ ). There was also evidence of a less pronounced deprivation-comorbidity association in older than younger patients. Twelve percent of lung patients with no or mild comorbidity had stage I or II disease. Amongst

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patients with moderate or severe comorbidity this proportion rose to 35% ( $p < 0.0001$ ). No such effect was seen in breast patients. Adjusting for stage and performance status, lung patients with moderate or

severe comorbidity were less likely to receive chemotherapy ( $p < 0.0001$ ) and more likely to receive radiotherapy ( $p < 0.0001$ ). Conclusions Comorbidity is shown to be associated with stage at diagnosis and treatment decisions. Survival by comorbidity score will also be presented. While these are exploratory analyses, our findings highlight some interesting areas for further exploration and illustrate the value of robust clinical data for informing both pre- and post-cancer diagnosis initiatives.

## Ref: 83 Oral

How public health institutions can contribute to healthy cities: a case study from Quebec, Canada.

Presenting author: **André-Anne Parent, Ph.D. (c)**

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Co-authors: Paule Simard, Ph.D., Bernard Roy, Ph.D., Michel O'Neill, Ph.D.

Aims : The province of Quebec, Canada, has put forward a cross-cutting strategy, (Support for the development of communities), in its infrastructures in order to increase population health. The strategy, by promoting citizen engagement, empowerment, partnership building, action on social determinants of health and healthy public policies, has provoked a paradigm shift ; nonetheless, many challenges are still present. This presentation illustrates how the strategy was implemented, changes in practices brought about by the strategy, elements pertaining to its successful integration and main challenges. Design, methods, participants and setting : Based on an interpretative approach, multiple qualitative methodologies were used in order to achieve the following objectives. - Study the implantation of a community development process. An ethnographic case study in an inner-city neighborhood of Quebec was first completed : 32 months of participant observation and 14 semi-structured interviews with citizens, community animators, local key informants and a community organizer. - Describe, from the perspective of community organizers in a local health centre, how their practice is influenced by the strategy. A reflexive practice group that met four times over a year was put in place in order to collect data from community organizers. - Identify elements pertaining to the integration of the strategy in the practice of community organizers and the organizations that employ them. In addition, 9 semi-structured interviews with key informants from the health sector were conducted. Results : The strategy has a high potential to contribute to healthy cities but has to put in place specific interventions in order to do so. Interviews and the reflexive practice group have allowed us to target various elements of comprehension. When implanting the strategy, a whole population approach needs to be respected, social and historical factors involved in community development have to be addressed, citizen participation needs to be reinforced by different empowering mechanisms, structural and intermediate-level determinants of health have to be considered, relevant intersectoral partners have to be present and finally, specific public policies have to target exclusion processes. Conclusions : The strategy has been integrated over the years in regional and local public health institutions and practitioners and decision-makers have a better understanding of what it involves. In order to pursue the paradigm shift instilled by the strategy, changes in vision and tasks need to be accomplished. Commitment is thus essential and consequently, public health institutions should clarify their goal: it is over all a pathway to reduce health inequities.

## Ref: 107 Oral

Using neighbourhood survey data to support integrated health policy development.

Presenting author: **Polina Putrik**

Maastricht University, Peter Debyeplein 1, 6229 HA, Maastricht, Netherlands.

Co-authors: Nanne De Vries, Suhreta Backus-Mujakovic, Ludovic van Amelsvoort, IJmert Kant, Hans van Oers, Maria Jansen

**Aims:** The objective of this study was to explore the use of the municipality neighbourhood survey data and identify which of the environment features at neighbourhood level measured by the regular surveys are relevant for health. This study is part of a larger project with the ultimate goal to support integrated health policy development with the aim at decreasing health inequities. **Design First**, a theoretical model to study neighbourhood determinants of health was developed based on existing literature. Data collected in regular municipality surveys was used to operationalize the social and physical aspects of the neighbourhood environment. These surveys include measurements on facilities for daily living, aesthetics and quality of roads and bicycle lanes, quality of housing, nuisance, aspects of social capital, safety etc., health status and socio-demographic background. Next, cross-sectional data from the survey was used to explore associations between the neighbourhood environment and health. Multi-level multivariable logistic regression models with individuals clustered in neighbourhoods were built for two health outcomes: self-rated health and risk of anxiety and depression. All models were adjusted for individual age, gender, education, and income group. **Setting** Municipality Maastricht with 121.813 inhabitants, South Limburg, the Netherlands. Participants 9,482 inhabitants of Maastricht municipality (mean age 55y., 50.3% males, 8% of total population), residing in 36 neighbourhoods (mean 263 respondents per neighbourhood, ranging from 88 to 488 respondents). Data was collected in 2010. **Results:** The municipality survey allowed us to construct 18 factors of physical and social neighbourhood environment (each measured on a scale from 0 (the worst possible) to 10 (the best possible)). Among all factors explored, Safety (OR0.88, 95%CI 0.80;0.97) and Social cohesion (OR0.82, 95%CI 0.72;0.93) were found to be associated with self-rated health. In the models with mental health (risk of anxiety and depression) as an outcome, again safety (OR0.83, 95%CI 0.70;0.98) and additionally traffic nuisance (OR0.81, 95%CI 0.70;0.95) were associated with increased risk. Residents of neighbourhoods with more negative perceptions of these environment factors were more likely to report worse health outcomes. **Conclusion:** Preliminary results showed that safety, traffic problems and social cohesion on a neighbourhood level appeared to be among the important issues and need to be considered under the concept of the integrated policies for health. Further research is needed to confirm and understand the underlying causal mechanisms. The municipality neighbourhood survey is a useful and rich source of neighbourhood level data and can be used in supporting health-related policy development.

**Ref: 273 Oral**

Benefits of urban population from major events - the case study Graz

Presenting author: **Dr. Erika Wichro**

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Stiftungtalstrasse 3.1, 8010 Graz, Styria, Austria, Austria.

Cultural capital of Europe, human rights city ? who are the real beneficiaries Background: Graz, second largest city in Austria with around 300.000 inhabitants encompasses 4 Universities and several educational institutes with various programs, attracting national and international students. Parts of the city were added to the UNESCO World Heritage List in 1999. Additionally, the city was awarded the cultural capital of Europe in 2003, and recently acknowledged as city of human rights. Objective: We are assessing who benefits from such cultural events and what is the local impact on urban health, education, social determinants, as well as in the global context. Is it the local population benefiting or are they just supposed to carry the (financial) burden? Methods: An extensive literature review as well as interviews are being carried out to assess the impact of such events at various levels of public engagement, political decision-making, multi-cultural awareness and acceptance. Conclusion: Special cultural events do have impact at various levels for the local population. The gains, however, may vary depending on the burden to be carried. Therefore, we suggest further research to evaluate the actual crossing boundaries and lessons learned from the past for future governance.

## Exchange 8

12:40

### Blood Borne Viruses in Urban Areas

Session title ABSTRACT PRESENTATIONS

Chair Dr Ayo Oyinloye

#### Ref: 41 Oral

The Long-term Effectiveness of Methadone Maintenance Treatment in Prevention of Hepatitis C Virus: A Modelling Study

Presenting author: **Mehdi Javanbakht**

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Authors Request: Not for Publication

## Ref: 225 Oral

### Factors Affecting Uptake of Hepatitis C Testing and Treatment amongst Intravenous Drug Users

Presenting author: **Dr Katie C Smith**

North West School of Public Health, Mersey Deanery, Sefton Council, Merton House, Stanley Road, Bootle, United Kingdom.

Co-authors: Dr Steve Clayton

**Background:** Hepatitis C is a blood-borne virus, and an estimated 130 - 170 million people worldwide are chronically infected. The initial stages of the infection are often asymptomatic; consequently, early detection is difficult. Long-term complications of the infection include liver cirrhosis, liver cancer and liver failure. Treatments are available, but they are not always successful in clearing the infection, and they also have significant side-effects. A major public health issue is the low uptake rates for both testing and treatment. Intravenous drug users (IVDUs) are a key at-risk population for hepatitis C. They have similar treatment outcomes compared with non-IDVUs, yet they are often regarded as a challenging patient population who are disengaged from services.

**Methods:** Ten current, or previous, IVDUs, were recruited through drug treatment services in a local authority in Merseyside. Semi-structured interviews were conducted with the participants exploring their individual experiences of testing and treatment, and discussing what influenced their decisions about uptake. Thematic analysis was then used to identify relevant themes and draw comparisons with existing knowledge.

**Results:** Whilst many findings were consistent with the current literature, interestingly, this research also identified novel themes which have previously been unreported. Themes surrounding stigma, lack of knowledge, the liminality of hepatitis C, and the chaotic nature of drug use as barriers to uptake of testing and treatment were in keeping with existing knowledge. However, additional themes surrounding access and engagement were identified, which were unrecognised by the majority of the existing work in this area. In terms of access to both testing and treatment, unreliable service provision, with frequent delays and repeated losses to follow-up, were reported. The unacceptable level of system barriers that currently exist are scantily identified in previous literature, which instead tends to focus on problems at the level of the individual IVDUs. This study also found that, conflicting with the typical depiction, many IVDUs accessing testing and treatment are engaged and compliant. Whilst the difficulties associated with chaotic drug use were acknowledged by the participants, when choosing to access services, IVDUs are often stable and actively seeking treatment for their addiction. Furthermore, for some, addressing the hepatitis C infection was part of the process of distancing themselves from drug use.

**Conclusions:** This research highlights that current practice fails to truly identify with the spectrum of addiction in relation to hepatitis C; furthermore, the generalising characterisation of IVDUs as challenging, unreliable and disengaged seems a disservice to those individuals committed to testing and treatment, despite the unreliability and complexity of the services they are trying to access. Future research and service development should consider how current service provision functions in relation to barriers to access and uptake, particularly at the system and provider level.

### Ref: 232 Oral

Awareness on Prevention of Blood Borne Diseases and Preventive Practices among Dental Practitioners of Some Selected Dental Clinics of Dhaka City

Presenting author: **Dr. Selmin Jahan**

Eminence, 3/6 Hena Nibash, Mohammadpur, Asad Avenue, Dhaka-1207, Bangladesh.

Co-authors: none

**Background and aims:** Dental Surgeons and health-care workers have always had a high risk of exposure to blood-borne diseases as a result of their occupation. Dental surgeons have substantial occupational exposure to blood and the risk of blood-borne infection because of frequent handling of sharp instruments, metal objects (e.g., wire), and bone fragments during operative procedures. Dentists must ensure they grasp the risk of communicable diseases. The aim of the study was to explore the level of awareness on prevention of blood borne diseases commonly transmitted during dental practice and examine the preventive practices by the dental practitioners. **Methods:** Cross-sectional study with an integrated approach combining qualitative and quantitative method was followed. The study used Structured Interview (SI) among 200 Dentist in Dhaka City as quantitative tool and, 20 Indepth Interview as qualitative tool for achieving the objectives. **Result:** 80% of the dentist interviewed said that they should be aware of AIDS and hepatitis B. 74% of the dentist interviewed wear gloves during all forms of treatment and 50% wash their hands before and after they change glove. Only 24% of the dentist interviewed sterilizes their instruments after every use and 55% sterilizes their instruments by autoclave and the rest by boiling. Only 24% of the dentist interviewed disposes used needles in a puncture proof, leak proof, approved sharps container. The rest 76% of the dentist disposes the used needles and other sharp waste along with the other waste in one same plain container. Only 54% of the dentist interviewed are vaccinated against Hepatitis B and of the 200 dentist interviewed none of them said that they disinfect the room surfaces and heat sterilizes the drill and triple syringe after every patient. **Conclusion:** Most of the dentists are aware of the threat of spread of blood borne diseases during their practices but they do not avail all the necessary steps needed for prevention of transmission of blood borne diseases from the patients.

## Exchange 9

12.40

### Health Promotion / Health Equity, Inequalities and Disparities

Session title ABSTRACT PRESENTATIONS

Chair Mr Jon Hobday

Ref: 331 Oral

Geographic clustering of cardiovascular diseases in Madrid city (Spain)

Presenting author: **Gomez-Barroso, D. and Prieto-Flores, M.E.**

Department of Geography, National University of Distance Education., C/ Senda del Rey 7, 28040, Madrid, Spain., Spain.

Co-authors: Vidal Dominguez, M.J.; Moreno-Jimenez, A.

Introduction: This work has been conducted within the context of a wider research project on environmental justice in Spain (Spanish Ministry of Science and Innovation, Ref. Project CSO2011-26177).

The aim of this study is to identify the spatial patterns of mortality from cardiovascular diseases for men, women and both sexes, and to find clusters of these diseases in Madrid city, during 2010.

Material and methods: An ecological study was conducted in Madrid city, using age-adjusted data of mortality from cardiovascular diseases of men, women and both sexes combined, by census tract level, during 2010. The information was obtained from the Statistics institute of the Community of Madrid and the Spanish National Statistics Institute. Standardized mortality ratios (SMR) were calculated for each census tract,

followed by smoothed relative risks (RRs) of cardiovascular disease mortality and the posterior

probability (PP) of relative risks, being greater than 1, using the Besag, York and Molliè autoregressive spatial models. Moran's Index was used to assess spatial autocorrelation of SMR globally. To calculate local rates or hotspots, the Local Moran's Index [known as local indicator of spatial association (LISA)] was applied.

Results: All the results by sex and both sexes were mapped. There were differences between men and women in the distribution of the diseases. The map of SMR, RR and PP for women and for both sexes showed some geographical variations in disease pattern, with higher risks in the peripheral census tracts. The Moran Index was 0.03 for men, 0.12 for women and 0.05 for both sexes. LISA maps also

showed differences between sexes and significant clusters ( $p < 0.05$ ) in peripheral areas too, for women and for both sexes. Conclusion: These results emphasize the value of spatial statistical techniques to identify health inequalities. Explanations for the spatial patterns of cardiovascular disease mortality in Madrid city might be associated with socioeconomic and environmental factors, which could have important implications of environmental justice for public health. In a next step, these factors will be examined by our research group.

## Ref: 470 Oral

Common urban health risks associated with migration, inequality and HIV: the cases of Johannesburg and New York City

Presenting author: **Jo Vearey**

African Centre for Migration & Society, University of the Witwatersrand, PO Box 76, Wits, 2050, South Africa, South Africa.

Co-authors: LeConte Dill; Courtenay Sprague

Background Migration and inequality, processes associated with cities in the global south and north, are linked to a range of urban health outcomes. Addressing structural and social intra-urban inequalities in health and adopting localised, 'place-based' responses are recognised as essential to tackling health inequities, including the unfair, unjust distribution of HIV infection amongst urban, primarily black, populations. This study aims to explore urban health in two cities in the global south and north closely associated with migration, inequality and HIV. South Africa, the country with the largest number of people with HIV, globally, has an estimated 10% HIV prevalence; urban populations have the highest prevalence. New York City has been referred to as the 'epicentre' of the HIV/AIDS epidemic in the United States. There is a need to learn across diverse contexts to design appropriate local-level responses to urban health threats. Through a collaborative exploration of responses in the global south and north to common urban health risks, Johannesburg and New York provide relevant settings for a focus on HIV responses. We consider the following questions: 1) How do the histories of migration and movement in urban centres impact HIV-related health outcomes? 2) What does the epidemic reveal about the spatial context of risks and responses? Methods A systematic desk review is undertaken, together with the consolidation of mixed-methods research previously conducted that unpacks the lived experience of urban migrants in the two cities. Research includes community-based participatory projects involving marginalised, poor urban groups of migrant adults residing in informal settlements and run-down inner-city buildings, public housing projects and with migrants engaged in sex work. A focus on migration and inequality allows for a comparison of how urban health needs are understood by local populations and local authorities, and how they are addressed within the two contexts. Emerging findings Both cities, built on migration, reveal that movement into and within these urban centres, remain important today: with intra-urban differentials (the result of histories of forced segregation, ghettoization and current gentrification) typifying both urban spaces. Whilst South Africa is associated with a generalised HIV epidemic and the USA with a localised epidemic, it is clear that within these urban settings, HIV is a key health risk for particular populations in both contexts. Preliminary conclusions The process of engaging across these diverse urban spaces affirms the richness of a comparative approach. There is a need to understand spatially- and socially-patterned health inequities - particularly their relationship to HIV - in order to develop appropriate localised interventions that address the lived experiences of urban poor migrant groups in cities of the global south and north.

## Ref: 147 Oral

Area level deprivation is associated to metabolic syndrome among Community and Child Health Network (CCHN) postpartum women

Presenting author: **Kaufman-Shriqui Vered**

Centre for Research on Inner City Health, the Keenan Research Centre in the Li Ka-Shing Knowledge Institute of St Michael's Hospital, Toronto, 209 Victoria St., Toronto, ON M5B 1C6 Canada, Canada.

Co-authors: Schafer P, Misir V, Morinis J, Dunkel Schetter C, Raju T, Vance M, Hillemeier M, Lanzi R, Ramey SL, Chinchilli VM, O'Campo P for the CCHN of Eunice Kennedy Shriver National Institute of Child Health and Human Development.

**Aims:** Area-level socioeconomic characteristics have been shown to be related to health status and mortality, though little is known about the association between community factors and metabolic risk among postpartum women. This study aims to develop indices representing social, economic, and socioeconomic deprivation and resilience using Principal Component Analysis (PCA). Indicators representing poverty, education, housing, immigration, sex composition, and employment were used to develop deprivation indexes which were later used to assess the correlation with maternal metabolic risk among participants of the multi-site Community and Child Health Network (CCHN) study.

**Design:** Residential census tracts from all participants in the CCHN study including multiple census tracts for participants who moved during the longitudinal follow-up were concatenated to 1123 unique census tracts. The association between metabolic risk factors, separately and as part of a composite risk score, which included: BMI quartile, Waist-Hip Ratio  $\geq$  top quartile, HbA1c  $\geq$  top quartile, Average Systolic Blood Pressure  $\geq$  clinical cut point of 120, Average Diastolic Blood Pressure  $\geq$  clinical cut point of 80 and HDL Cholesterol  $\leq$  clinical cut point of 40 were assessed using the quartiles of each deprivation index.

**Setting:** A community-academic partnered, multi-center (Baltimore, Los Angeles, Washington DC, Los Angeles and North Carolina, USA), observational study.

**Participants:** Women, 18- 40 years of age, recruited shortly after delivery, which self-identified as Non-Hispanic Black, Non-Hispanic White and Hispanic and resided in the study communities.

**Results:** PCA resulted in two unique indexes that accounted for 67.5% of the total variance for the combined all-site area deprivation index. The first index accounted for 43.3% of the total variance whereas the second index added 24.2% of the variance. The first factor correlated highly with areas characterized by high percentages of Latinos, foreign born, who spent more than 30% of their income on housing costs, lived in a crowded home ( $>1$  person/room) and where high percentages of the population had less than a high-school education at 25 years of age. The second factor correlated highly with areas characterized by high percentages of African-American, single mothers, and unemployed. In a multivariate logistic

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regression model, using the quartiles of each index, women who reside in the geographic area of Q4-Q2 of factor 2, in comparison to the least area-deprived group (Q1), have almost double the risk of having a

high metabolic risk score of 3-6 vs. the lower risk group having a composite score of 0-2 (Q2vs.Q1:OR=2.09 P=0.001, Q3vs.Q1:OR=1.89, P=0.006, Q4vs.Q1:OR=1.95 P=0.004 respectively).

Conclusions: The association between census variables and maternal metabolic risk suggests the utility of using area deprivation index in the research of neighborhood effects on maternal cardiovascular and metabolic risk.

## Exchange 9

14:00

### Policymaking and political leadership for action on urban health

Session title Active Travel Bill and Health Policies

Chair Professor Gabriel Scally

#### Ref: 208 Oral

Generating Political Priority for Urban Health and Nutrition: Application of a Policy Framework

Presenting author: **Yusra Shawar**

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Co-authors: Lani Crane

**Background:** Over the past two decades there has been much discussion of the challenges posed by rapid urbanization in the developing world, yet the health and nutrition of the urban poor continues to receive little political priority at the global level. No research has specifically examined why little action has been taken globally, despite wide recognition that the world is rapidly urbanizing, and what it will take to generate political priority going forward. **Aims:** Drawing on social science scholarship concerning how issues come to attract attention, this study examines factors that have shaped political priority for urban health and nutrition. We draw on the Shiffman-Smith (2007) policy framework, which consists of four categories: 1) actor power, 2) issue framing, 3) the political contexts within which actors operate, and 4) characteristics of the issue itself. **Methods:** The paper triangulates among several sources of data, including 18 semi-structured interviews with experts involved with agencies that shape opinions and manage resources in global health, published scholarly literature, and reports from organizations involved in urban health provision and advocacy. **Results:** Several key factors currently hinder urban health's advancement globally. First, with respect to actor power, there is no policy community cohesion or unifying political entrepreneur, and limited mobilization of civil society to champion the cause. While there has been demonstrated uptake in momentum for 'urban' among development organizations, funders, state governments, and academics, this area has yet to be recognized as its own discipline and be attached to uniform, formal strategic policies. Second, with respect to framing, there is a lack of consensus in defining 'urban', which has lead to longstanding conceptual and measurement difficulties. Third, concerning political contexts, the MDGs, rapid climate change, and the recent demographic shift to more than half of the world's population living in urban settings have been largely untapped as policy windows. Finally, with respect to issue characteristics, there is limited disaggregated data and a lack of accepted metrics available to capture the burden of disease and poverty within disadvantaged urban communities, which is needed to quantify the magnitude of the problem, develop effective interventions,

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and ultimately present it as a critical, unmet need. Conclusion: The study concludes with insight around what can be done to secure attention and resources for this overlooked area of development. This

includes focusing on health equity by framing urban health problems through a 'urban-rural continuum' model, rather than reinforcing a strict urban-rural dichotomy; seeking more urban-specific data that enables disaggregation to highlight the most vulnerable urban communities; supporting systematic knowledge-sharing of effective urban interventions; and capitalizing on policy windows like the post-MDG discussions.

## Ref: 214 Oral

Exploring the feasibility of a local authority level analysis of the spatial relationship between outdoor air pollution and health outcomes using GIS

Presenting author: **Giles Ratcliffe**

Sheffield Occupational Health Service/ University of Sheffield, Silverwood, Occupational Health, Northern General Hospital, United Kingdom.

Co-authors: Subhashis Basu

**Background** In the last two decades, the concept of 'environmental justice' in relation to the distribution of urban air pollution, deprivation and health inequalities has become a global concern. Previous studies have used Geographical Information Systems (GIS) to establish and display the association between air pollution and ill health within cities around the world. At a local government authority level however, it is the application of these techniques that could be of greatest use in understanding the association between spatial variation in air pollution and inequalities in health. **Aims** To assess whether a local government public health team without access to specialist expertise has the resources to identify statistically significant relationships between regional variations in air quality and distributions of ill-health for the purpose of urban development. **Design** An ecological, cross-sectional study of the spatial distribution of NO<sub>2</sub> and health outcomes using a GIS in a northern United Kingdom city. Health outcomes included life expectancy, lung cancer, cardiovascular disease and stroke, COPD and asthma, and low birth weight. Confounders assessed included deprivation, smoking rates, and dietary consumption of fruit and vegetables. **Setting** Rotherham, a city in the north of England with a population of around 250,000, close to two major motorways, and experiencing levels of deprivation above the national average. **Results** Using readily available routine health information, local air quality (NO<sub>2</sub>) data and GIS software, we identified the relationship between the spatial variation in air pollution and health outcomes at local government authority level. **Conclusions** In the absence of access to specialist expertise, it is likely that relationships between spatial variation in air pollution and health outcomes at a local authority level can be identified and mapped using a GIS within local government public health teams. However, such analysis is dependent upon having sufficient environmental air pollution data to enable an accurate modelling of variation across an urban area, access to the necessary GIS software and resource to undertake such an analysis. This can inform urban development policies to redress the balance of environment inequalities within local government settings.

## Ref: 272 Oral

The development of the Dutch Vitality Questionnaire: a tool to measure positive health status within neighborhoods

Presenting author: **Jorien E Strijk, PhD**

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Background Vitality (described according to three dimensions: energy, motivation and resilience) is a concept nowadays often used by policy makers, professionals and scientists to address the positive aspects of health and the capabilities of someone instead of the limitations. This paper presents the development of an instrument (the Vita-16©) to measure vitality among Dutch adults and the way these data can be used by municipalities and local and national actors (e.g. health services, health care providers, health insurers) to 1) determine neighborhoods with relatively low mean vitality scores and 2) monitor how vitality rates develops after implementing interventions aimed at enhancing vitality within specific neighborhoods. Methods The Dutch Vitality Questionnaire (Vita-16©) was developed in four subsequently steps. Step 1 involved selecting items from existing questionnaire measuring aspects of vitality. During step 2, policymakers, professionals and researchers scored these items on relevance, leading to a comprehensive concept vitality questionnaire, which was pilot tested (step 3) on intelligibility and ceiling effects. During step 4 (validation study), the concept vitality questionnaire was tested among a sample of 1300 Dutch persons of an internetpanel. Items were reduced based on collected data and the final questionnaire was validated by verifying the structural and construct validity and reliability. Results Most relevant items were selected per vitality dimension based on consensus of 314 experts, resulting in a 34-item (E:n=9; M:n=14; R:n=11) concept questionnaire. During pilot-testing, language use was simplified and answering categories were adjusted to prevent ceiling effects. During field-testing the concept questionnaire was shortened resulting in the Vita-16©: a short 16-item questionnaire containing simple statements, which have to be answered on a 7-point likert scale (1=seldom to 7=always). The Vita-16©appeared to be reliable (a:0.89-0.95) and showed good validity. Conclusion The Vita-16© is a short valid and reliable questionnaire to measure three dimensions of vitality in the adult Dutch population. The Vita-16© can relatively easily be added to existing monitors to measure vitality on neighborhood/city/town level.

## Exchange 10

12:40

### Lifestyle and Wellbeing: Obesity, Cancer and Diabetes

Session title ABSTRACT PRESENTATIONS

Chair Dr Shona Kelly

#### Ref: 373 Oral

Real-Time Fluctuations in Environmental Context and Snack Food Intake in Black Women in Chicago

Presenting author: **Shannon N. Zenk**

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Co-authors: Ashley McDonald; Colleen Corte; Angela Odoms-Young; Irina Horoi; Barth Riley

**Purpose.** In the U.S., Black women have a disproportionately high burden of obesity and diet-related disease. Snack-type food products (e.g., regular soda, cake, candy) are major contributors to energy, fat, and added sugar intake, and Black adults have higher intake of many of these foods and beverages. The environments to which Black women are exposed may contribute. Dietary intakes, including snack food intake, are shaped by decisions throughout the day, but little is known about environmental and other determinants of intra-individual variations in dietary intakes. Using mobile technology-based ecological momentary assessment, this study examined the influence of fluctuations in perceived environmental context throughout the day on snack food intake in urban Black women. **Sample and Setting.** Non-probability sample of Black women ages 25-65 (n=101) in Chicago, USA. **Methods.** Using signal-contingent sampling, women were signaled once during five blocks of time daily for seven days to complete a web-based survey via study-provided smartphones (n=35 signals). Snack food intake was measured at each signal using five items (e.g., chocolate, cookies), and the sum was dichotomized for analysis. For those who indicated they ate or drank (not just snack foods) since the last signal were asked whether aspects of the food environment 'made it easier' to eat or drink, from which we derived multiple variables on environmental facilitators: food/beverage availability; inexpensive food/beverages; near fast food restaurant, convenience store, or bakery; and near grocery store. We also asked how many good-tasting, high-calorie foods/beverages were available. Random effects logistic regression estimated relationships controlling for demographics. **Results.** The mean age was 44.2 (SD=10.5); 44.6 had a college degree; 38.6% were employed full time; and the mean per capita income was \$17,270 (SD=\$15,173). On average, women completed 68% of the 35 surveys. Women consumed snack foods at 42.8% of the signals. Women perceived ubiquitous availability of food and especially energy-dense foods, with at least one good-tasting, high-calorie food reported as available at 90.8% of signals and easy availability of food reported

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as a facilitator at 59.7% of signals. Having 1-2 and 3+ good-tasting foods available were associated with a 3-6 fold increase in consuming snack foods, respectively ( $p<0.001$ ). Perceived easy availability (odds ratio

(OR)=1.78;  $p<0.001$ ) and fast food restaurant, convenience store, or bakery proximity (OR=2.08;  $p<0.001$ ) were also positively associated with snack food intake. Perceived grocery store proximity and food expense were not associated with snack food intake. Conclusions. Environmental context is related to intra-individual variations in snack food intake in urban Black women. Policies are needed to reduce exposure to energy-dense snack foods.

### Ref: 14 Oral

Self Care practice and its associated factors among diabetics patients in Addis Ababa public hospitals, cross sectional study

Presenting author: **Melat Mamo**

The Carter Center Ethiopia, Addis Ababa, Ethiopia.

Co-authors: Meaza Demissie

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**Abstract Background:** Diabetes is one of the most prevalent non-communicable diseases globally, presenting a significant public health burden on the basis of its increasing incidence, morbidity, mortality, and economic costs. The prevalence of the disease is gradually increasing in the developing countries; Ethiopia is also facing a growing morbidity and mortality of diabetes. Self care of diabetes is essential for control of the disease and improvement of quality of patients' life. Thus, this study has assessed self care practice and its associated factors among diabetes mellitus patients in Addis Ababa public hospitals.

**Methods:** In this cross-sectional study, 660 diabetic patients were selected through systematic random sampling method; data was collected from November to December 2011. Patients were interviewed using a structured questionnaire. Based on the patients answer to the practice questions patients were categorized as those with good and poor levels of practice. Binary and multivariate logistic regressions were used to exam the association between self-care practice and different factors. **Results:** The result of the study showed that only 60.3 % (95% CI: 56%, 64%) of participants had good self care practice. There was significant association between mode of treatment AOR= 1.94(95%CI: 1.31, 2.87), social support system AOR=1.59(95% CI: 1.10, 2.31), being member of diabetic association AOR= 2.39(95% CI: 1.19, 4.81), diabetes education from health professionals AOR= 2.79(95% CI: 1.95, 3.99) diabetes knowledge AOR= 3.13(1.54, 6.39) and good self care practice. **Conclusion:** Despite the important role of self-care practice in management of diabetes and preventing its serious complications, a substantial number of the patients had poor self-care practice especially lack of regular exercise and self monitoring of blood glucose, which have critical roles in controlling diabetes. **Key words:** Self-care practice, diabetes mellitus.

Ref: 304 Oral

Assessing environmental features related to mental health: developing methodology

Presenting author: **Yu-Tzu Wu**

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Co-authors: Carol Brayne

**Backgrounds** Community environments have been recognised as one of the major determinants of health. Associations between mental disorders and features of built environment have been reported but an enduring research challenge is the development of methods to efficiently capture environmental features in relevant study settings. Instead of using indirect data, such as census and Neighbourhood Statistics, direct observation of built environment in local area is considered to provide primary data with more detailed information. However, traditional physical audit can be costly and time-consuming with limitation of small sample size. This aim of this study was to develop a valid and efficient measurement method to assess physical features related to mental health and quality of life in large populations.

**Methods** A measurement method using visual streetscape images was developed to assess the environmental features related to mental health and quality of life. Using images of Google Street View, the assessor virtually 'walked through' the streets to conduct property and street level assessments based on items in Residential Environment Assessment Tool (REAT), an observational instrument targeting the micro-scale environmental features related to mental health and quality of life in the UK postcodes. Four steps were included in this study: (1) a validation study to test inter-method reliability of physical and visual audits; (2) application of the new method to the 1200 postcodes in both rural and urban areas of England; (3) testing for bias in unavailability of Google Street View through selection of a sample of postcodes with incomplete or unavailable data for physical audit; (4) a comparison of new and old streetscape images and changes of community environments over time. **Results** The validation study showed that the results of conducting the REAT by visual audits generally correspond well to direct observations. Among 1200 postcodes, over 85% of the postcodes can be assessed completely through visual streetscape images. One assessor can complete about 20-24 postcodes per working day. Postcodes with missing data in visual audits were more likely to have poor quality of built environment in local areas than postcodes with complete data. Good agreement of the results between new and old images indicated generally stable conditions of the built environment between 2008 and 2012. Minor changes can be detected by comparing the two sets of images. **Conclusions** Conducting the REAT through streetscape images can be an efficient and convenient method and provides an opportunity to investigate the influence of specific environmental features on mental health in large populations. The environmental data can be linked to health databases for study their associate with mental health of residents.

Ref: 856 Oral

Psychosocial risks for Diabetes

Presenting author: **Shona J. Kelly**

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Co-authors: Mubarak Ismail

Current policy around Type 2 diabetes (T2D) interventions to try and reduce incidence and prevalence largely invokes a bio-behavioural model. This approach is also reflected in the research literature where most research that attempts to predict the development of diabetes is restricted to conventional clinical risk factors. However, a few researchers are now suggesting that psychosocial factors (PSF), including stress, may increase the risk of developing diabetes. Cardiovascular disease (CVD) has been causally linked with psychosocial risk factors such as socioeconomic status, control, stress and hostility. And, while T2D and CVD share many common risk factors, the role that psychosocial factors may play in the development of diabetes is unclear. This is not because research has failed to find the association but rather because the necessary research or analysis has not been conducted or the results interpreted from this perspective. Consistent with CVD research, our working hypothesis is that the underlying mechanism is chronic activation of the physiologic stress response. The project is a comprehensive review of the literature on the link between T2D and PSF focusing on data from prospective studies that investigated the risk for developing diabetes (alone or as one of many health outcomes). Thematic analysis of the PSF identified resulted in 4 categories for presentation of the results: 1) subjective & objective exposure to stressors; 2) mental health; 3) aggressive behaviour & conflict with others; 4) position in the status hierarchy. The review has identified a wide array of psychosocial circumstances that have been found to be associated with T2D in longitudinal studies. Even after controlling for conventional risk factors, an increased risk for T2D is seen in people: exposed to stressful working conditions or traumatic life events; with depression; with personality traits or mental health problems that put them in conflict with others (such as those with Type A personality or schizophrenia); of low SES either currently or in childhood; and in minority populations independent of current SES. The review also highlighted an almost complete lack of attention paid to non-biobehavioural factors; i.e., all risk was attributed to people behaving badly rather than the social circumstances in which they lived. We suggest that diabetes prevention would be more effective if 1) PSF, and in particular the problem of social disparities, were recognised and 2) intervention programmes targeted the reduction in social disparities as part of a comprehensive approach to reducing the incidence of diabetes.

## Exchange 11

12:40

### Urban Health Metrics / GHIFT

Session title ABSTRACT PRESENTATIONS

Chair Dr Dajun Dai

Ref: 532 Oral

Developing Frameworks for Measuring, Collecting, Analysing, Presenting and Disseminating Urban Health Data

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Co-authors:

Urban settings are characterised by rapidly changing environments which have significant influence on urban population health. As cities and other urban settings around the world are rapidly becoming the main places for human settlement, it becomes imperative to have clear urban health data frameworks for the understanding of urban population health. Therefore, this concept paper aims to advocate and campaign for the development of more systematic and better urban population health data frameworks. It is based on a review of the literature on matters related to urban population health data collection, storage, analysis, accessibility, dissemination and use; including reviews of urban health observatories around the world. The paper argues that up-to date data in cities is required for effective policies, health promotion strategies, healthcare planning and provision, resource allocation and health equity, the fight against health inequalities and urban healthy public policy. Urban settings have got an advantage as far as urban population health data collection is concerned. There are many different platforms, organisations, ways and levels at which urban population health data can be collected. However, due to the complexities of the urban environment and urban health data collection, storage, analysis, accessibility and dissemination in many cities, urban health data systems are usually fragmented and not organised in a coherent manner. Therefore, whilst there is much urban health data collected in urban settings, we often struggle to utilise and make sense of the data and information for the benefit of urban population health. The paper suggests and supports the idea of developing urban health observatories (UHOs) as one of the key solutions to problems of urban population health data collection, storage and utilisation. It shows that an UHO may be more effective way of hosting disaggregated neighbourhood and population sub-group level data that is useful for addressing health inequalities between different places and urban population sub-groups, including resource allocation for health equity.

## Ref: 550 Oral

A GIS-based Urban Green Space Indicator? The Public Health Rationale and Results from a Case Study

Presenting author: **Matilda Annerstedt**

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Co-authors: Andrey Egorov, Pierpaolo Mudu

City living is associated with increased levels of chronic stress and restricted space for recreation and physical activity. This contributes to mental disorders and other non-communicable diseases. Providing urban green spaces to facilitate healthy living has lately achieved growing attention, following recent research which has demonstrated nature's positive health effects. Apart from providing opportunities for physical activity and stress recovery, urban green spaces also contribute to improved air quality, cooling effects, and reduced noise. As part of WHO's goal to create healthy urban environments a need for an urban green space indicator has emerged. WHO has coordinated the development of an indicator methodology. The method involves Geographic Information System (GIS) analysis of land use and population distribution data to estimate the proportion of an urban population living within 300 m from a public green space, as a proxy for likely accessibility. In the case study land use data were derived from Urban Atlas, the most updated land use database for EU countries. Urban Atlas provides a thematic land use classification and the 'Green urban space' class was applied. The population data were at census tract level. Several buffer distances were tested for available green space. A 300 m buffer distance was selected for this case study and the population within this buffer was summarised. The indicator was calculated as the proportion of the city's total number of inhabitants living within the buffer. We also tested the variance of the indicator value depending on the size of green space. With this buffer distance a rather high indicator value was achieved; 82% of the population has access to green spaces within 300 m, when no accountancy was taken for size. Selecting green spaces larger than 5 hectares resulted in a substantially lower score: 31%. A size restriction set at 1 hectare reduced the indicator to 69%. The method is user-friendly and straight forward and it can be implicated in many European cities, although it contains a few limitations. For example it is difficult to enclose green space quality features in this kind of indicator, aimed for broad implementation. Other issues that may be considered in future development, or in studies aiming for further indicator validation, are accountancy for relative green space distribution and relationship between availability and accessibility. It is also recommended to perform more studies on the impact of distance and size on use of green areas. An urban green space indicator is required in order to bring research on the benefits of green spaces to public health into action. The tested indicator can be used for e.g. city comparisons, urban planning, and public health improvements. It is an important step forwards in recognising the associations between environment and health.

## Ref: 540 Oral

Statistical models for Prediction of Outcomes after traumatic brain injury based on patients admission characteristics

Presenting author: **vineet kumar kamal**

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Co-authors: DR. RM Pandey, DR. Deepak Agrawal

**Background:** Traumatic brain injury is the leading cause of disability and death all over the Globe. An early estimation of outcome after TBI is of great importance for several reasons. Our aim is to develop and validate prognostic models using admission characteristics for mortality at 30 days and unfavorable outcome according to Glasgow Outcome Scale at 6-months post trauma in patients with moderate and severe head injury. **Methods:** We used retrospective trauma database (n=1466 patients) for severe and moderate head injury patients from JPN Apex Trauma Center (AIIMS, ND), to develop and validate prognostic models. JPN Apex Trauma Center is currently the best and biggest integrated level I trauma center in India. 70% of the data were utilized for models development and rest 30% were utilized for validation of the models. For each outcome, we developed three different models based on admission characteristics using logistic regression analysis and on the basis of these models; we also developed score charts in a user friendly manner to estimate probability. The performance of the models was assessed in terms of discrimination and calibration. Discriminative and celebrative ability were assessed with the area under the receiver operating characteristic curve (AUC), and Hosmer-Lomeshow test (H-L test) respectively. We validated these models with split sample method. **Results:** For mortality, model-1 included age, motor score, papillary reactivity, limb movement as independent predictors for mortality, but for unfavourable outcome, model-1 included age, gender, motor score, papillary reactivity, limb movement as independent predictors. For each outcome, model-2 included CT features (Midline shift, SDH, EDH, Basal cistern effaced, tSAH/IVH) as independent predictors in addition to independent predictors of model-1. Similarly, model-3 included laboratory variables (Levels of haemoglobin, glucose, sodium, and creatinine) as independent predictors in addition to independent predictors of model-2 for each outcome. The discriminative ability of the three prognostic models for mortality and unfavourable outcome was excellent in the development data set (AUC 0.845-0.905). The split sample validation method in validation data set confirmed the discriminative ability of these three models (AUC 0.836-0.880) for each outcome. Calibration in validation data set for model-2 was good for both outcomes (H-L test p-value>0.05) but for model-1 and model-3, it was poor (H-L test p-value<0.05). A Score chart was used for clinical usefulness. **Conclusion:** We are the first to show limb movement and creatinine level as independent predictors of mortality at 30 days and unfavorable outcome at 6-months post trauma in TBI patients. Our models performance is good and these models are generalizable for predicting outcomes in new patients. We recommend for the use of these models in predicting outcomes for severe and moderate TBI patients in low-and middle-income countries.

**Exchange Auditorium**

**12:40**

**Session title: Special Plenary on Global Women's Health**

**Chair: Dr Gaynor MacLean**

**Ref: 600 Oral**

Systematic Review of Postnatal Interventions to Prevent Major Morbidity and Mortality in the Postnatal Period

Presenting author: **R Smyth**

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Co-authors: C Bedwell, T Lavender

Aim Maternal mortality remains a significant global problem, accounting for approximately 287,000 deaths per year; many of these occur in the postnatal period. The focus of this review, commissioned by the WHO is to present the evidence for preventative interventions in the postnatal period, specifically in relation to puerperal sepsis, secondary postpartum haemorrhage, hypertension, anaemia, postnatal depression and obstetric fistula. Design A systematic review was undertaken using standard Cochrane techniques. We carried out statistical analysis using the Review Manager software. The evidence was assessed for quality using GRADE methodology. Results Hypertension: There was little conclusive evidence relating to interventions to prevent disorders related to hypertension and optimum timing of the intervention. For women with antenatal hypertension that continued into the postpartum period, there is a trend that magnesium sulphate may reduce the risk of maternal death and eclampsia. Postnatal depression: There was little conclusive evidence to support many of the preventative interventions for depression in the postnatal period. Some evidence indicated that the incidence of depression may be reduced at 3 months postnatally by debriefing, peer support and educational interventions. Anaemia: There was a disappointing lack of evidence regarding interventions to prevent postpartum anaemia and no reliable conclusions can be drawn. One study suggested that for women randomised folic acid there may be an increase in haemoglobin status at three and six months. Sepsis: Studies present outcome data on symptoms indicative of sepsis; none of the outcomes reported had confirmation of the microbial nature of a disease to confirm sepsis. From the four small trials on the prevention of infection, there are insufficient data for any reliable conclusions. Secondary PPH: Only two studies considered interventions in the postnatal period to prevent secondary PPH. There was no conclusive evidence to support either methylergometrine or routine examination and curettage to prevent secondary PPH. Fistula: We were unable to assess any interventions related to the postnatal prevention of fistula development due to the lack of available evidence. Conclusion The lack of evidence relating to postpartum interventions highlights

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the need for urgent high quality research into this area. This is of particular importance given the high levels of maternal mortality and morbidity associated with these conditions and the need to improve

maternal health in line with MDG5. We recommend that high quality research is required in this area to rigorously test existing innovations where evidence is lacking. We also recommend that innovative interventions, which may have an impact in preventing postnatal mortality and morbidity, are developed and rigorously tested within high quality research studies.

**Ref: 433 Oral**

A phase 1/2 trial of a self-applied, non-surgical treatment for HPV related high-grade cervical neoplasia

Presenting author: **Dr Ian N Hampson**

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Author Request: Not for Publication

## Ref: 262 Oral

'If she sits with the child breastfeeding, who will fend for her?' Factors affecting actualization of the WHO breastfeeding recommendations in urban poor settings

Presenting author: **Elizabeth Kimani-Murage**

African Population and Health Research Center, P.O. Box 10787, 00100, Nairobi, Kenya.

Co-authors: Wekesah F, Kyobutungi, C, Wanjohi M, Muriuki P, Musoke R, Norris S, Madise, N, Griffiths P

**Background:** The WHO recommends exclusive breastfeeding in the first six months of an infant's life for optimal growth, development and health. Extended breastfeeding for two years or beyond is further recommended. Poor breastfeeding practices are widely documented in developing countries including Kenya, and are particularly a problem in the urban slums, where most urban residents in Kenya live. Only 2% of infants are exclusively breastfed for six months, while 15% are not breastfed beyond one year. The aim of this study is to establish the local contexts and norms, and other factors which contribute to breastfeeding practices in urban slums in Nairobi Kenya. **Methods:** In-depth interviews and focus group discussions were conducted with women of child-bearing age, focus group discussions with community health workers and village elders; and key informant interviews with other key informants in the community including religious leaders, health care professionals, traditional birth attendants, and women and youth group leaders. Data were coded in NVIVO and analyzed to identify themes and their repetitions and variations. **Results:** Results indicate sub-optimal breastfeeding practices and general lack of appropriate knowledge regarding breastfeeding among the slum residents. Additionally, the narratives reveal the perceived impracticalities of adhering to optimal breastfeeding practices due to a number of hindering factors: social economic and socio-cultural. Livelihood was a key factor as women were said to be often the sole breadwinners. With the cash-based economy, where labor is mainly casual, maternity leave as applies for women in formal labor does not apply. Working women were therefore said to often return to work after barely two weeks following delivery, having no other form of livelihood, making exclusive breastfeeding difficult. Additionally the working conditions were said to be unconducive for breastfeeding as women do not generally have the option of carrying their babies to work; while expressing breast milk in this setting is not an accepted or practical option. Lack of food for the mother and poor diet, due to poverty were also perceived to affect breastfeeding as there are rampant perceptions of 'no enough milk' as 'there is no food'. Teenage pregnancies were also said to be rampant; and body image (worries of breasts sagging and aging quickly) was seen as a key factor influencing breastfeeding behaviours among young mothers. This was also linked to young mothers being involved in transactional sex needing to keep in shape because of few options for livelihood. HIV, prevalent in the slum settings, is also an important factor due to mixed understanding regarding breastfeeding for HIV positive women and stigma. **Conclusions:** A conglomeration of factors including misconceptions, social policies, socio-economic and socio-cultural factors are perceived to shape breastfeeding behaviors among urban poor mothers in Nairobi. These factors make it difficult to adhere to the WHO recommendations

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for breastfeeding. Interventions should aim at addressing the knowledge gap and misconceptions, empowerment of women and social protection for breastfeeding women. Approaches targeted at

mothers without considering the wider ecological setting are unlikely to be successful in improving infant feeding in this environment.

**Ref: 792 Oral**

‘Maternal Death: The Elephant in the Room’: A Grounded Theory of Community’s Perceptions and Experiences of Maternal Death in Aceh, Indonesia

Presenting author: **Suryane Susanti**

The University of Manchester, Jean McFarlane Building, Oxford Road, The University of Manchester, M13 9PL, United Kingdom.

Co-authors: Christine Furber, Tina Lavender

Background Indonesia has one of the highest rates of maternal mortality in Southeast Asia. Community participation has been known to reduce maternal mortality in some areas in Indonesia. However, in Aceh Province, the prevalence remains higher than the general Indonesian maternal mortality rate. Aim To gain an understanding of pregnancy and childbirth experiences from multiple perspectives, in relation to the use of maternal health services in Aceh, Indonesia. Objectives: - To explore the role of the community in influencing maternity practices/decisions. - To explore factors which promote and hinder engagement with the maternal health programme. Methodology and Setting The conceptual framework was based on the importance of community engagement in improving maternal health. A qualitative study design with a grounded theory approach was utilised. This approach was chosen to gain an understanding of social processes and ways in which experiences of pregnancy and childbirth are related to maternal death incidents. The data collection used multiple methods that involved a series of in-depth interviews, observations and focus group discussions with women, family members, a village leader and health professionals. The sample size was determined by data saturation (19 women, 15 family members, 7 health professionals, 3 kaders, 4 student midwives and 1 village leader participated). Ethical approval was gained and the research setting was in the two villages of Aceh Besar District, Aceh Province, Indonesia. Data were coded and analysed by following a constant comparison process. Result and Implications The emergent core category, entitled ‘maternal death: the elephant in the room’ explains the views of the community about maternal death incidents in the research setting. The research findings highlighted that despite the maternal mortality rate still being high in the region, maternal death was not focused upon, as a problem within the community. It revealed as a hidden problem and was related to inadequate maternity practices in the village. It consist of four interrelated categories. The categories of the value of midwifery in the community, desicion-making of maternity care, social control of the childbearing and distancing of maternal deaths; explain maternity practices in the community. Understanding of social processes related to maternal health can assist in informing strategies to improve the quality of maternal healthcare in Aceh Indonesia.

## Exchange Auditorium

14:00

### Global Women's Health

**Session title** Working collaboratively to improve women's health in low resource settings

**Chair** Professor Tony Redmond

#### Ref: 244 Oral

Programs for community and direct distribution of misoprostol to prevent post-partum haemorrhage: a rapid literature review of factors affecting implementation.

Presenting author: **Dr Helen Smith**

Liverpool School of Tropical Medicine

Co-authors: Christopher J. Colvin, Esther Richards, Jeffrey Roberson, Geeta Sharma, Kusum Thapa, Metin Gulmezoglu.

Postpartum haemorrhage remains a major cause of maternal mortality in low income countries. Recent efforts to prevent post-partum haemorrhage (PPH) have focused on providing women with access to oral misoprostol during home birth. The World Health Organization recommends using lay health workers to distribute misoprostol in settings where skilled birth attendants are not available, but a key research priority is to understand the safety and effectiveness of direct distribution to women. An equally important consideration is implementation, and identifying the factors that shape the outcomes of these programs in various settings. Aim: The aim of the study was to synthesize current knowledge about the barriers and facilitators affecting implementation of programs for community and direct distribution of misoprostol to prevent post-partum haemorrhage. Design and methods: We combined a rapid review of the existing literature and primary research conducted with program stakeholders. Findings from the literature review and primary data collection were extracted and analysed separately and then integrated. Results: We present key outcomes and features of community and direct distribution programmes that are in operation or have been piloted globally. We categorised factors influencing implementation into those that operate at the health system level, factors related to the community and policy context, and those factors more closely connected to the end user. Health system barriers included inconsistencies in training depth and content, weak supervisory structures, interrupted drug supplies, and poor health information management. Community and policy context factors influencing implementation of community-based distribution programmes related to fears about misuse, fears about disincentivising facility births, and the national and global policy environments. End user related factors included acceptability of misoprostol, ability to self-administer appropriately, and the importance of information, education and communication (IEC) campaigns. Conclusion: Most of the debates around community-based distribution have not been about the safety or efficacy of misoprostol in preventing PPH but instead have centred on other potential risks and benefits of delivering this drug to pregnant women and

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community members for administration in the home. However, the risk of harms and other threats to the programs appear manageable and the potential benefits of both community and direct distribution of

misoprostol, especially for women who have no realistic chance of receiving expert care for PPH, are considerable.

## Charter 1

12:40

### A Perspective from Fresh Minds

Session title ABSTRACT PRESENTATIONS

Chair Miss Jemima Heap and Mr Khaleel Ahmed

Ref: 710 Oral

Why are street children more vulnerable to HIV?

Presenting author: **Jemima Heap**

University of Manchester, Manchester Medical School, Stopford Building, Oxford Road, Manchester M139PT, United Kingdom.

Co-authors:

Aims: To collate existing research in order to explore links between youth living outside family or social care, namely 'street children', and vulnerability to HIV infection. To compare these links with those affecting their counterparts who live at home. In particular to focus on sexual behaviours (vulnerability to sexual abuse, sex as a transaction and other risky sexual practices) and intravenous drug use as dominant routes of transmission and the gender differences associated with these, but also to consider a lack of knowledge and understanding of the virus as a key risk factor in HIV infection. Background: There are children living outside family or social care in cities all over the world. Breakdown of the extended family structure has been long documented in the Western world, but is now encroaching on developing countries, particularly in light of modern conflicts that have created large orphan populations. HIV is a global issue to which this demographic is particularly vulnerable as they are isolated from normal routes of health education (i.e., parent to child, school to child, health worker to child), as well as access to healthcare services. Design: Literature review Results and conclusion to be presented at the conference

**Ref: 833 Oral**

Methods to increase response rates to questionnaires

Presenting author: **Khaleel Ahmed**

University of Manchester, Stopford Building Oxford road, Manchester M13 9PT, United Kingdom.

Co-authors:

Author Request: Not for Publication

## Ref: 850 Oral

Is the audit tool for the Communicable Disease Outbreak Plan of Public Health England executable and appropriate for the organisation's needs?

Presenting author: **Saklain Farooq**

University of Manchester, University of Manchester, Oxford Road, Manchester, M13 9PL, United Kingdom.

Co-authors: Dr Lorraine Lighton

Outbreak Plans are put into place by health teams across the United Kingdom to deal with outbreaks of disease in a particular region. As with plans used in other contexts, they usually have auditing tools to measure how closely the team has been following the plans. This paper will review the auditing tool used by the Health Protection Agency (now part of Public Health England) in the latest version of their Communicable Disease Outbreak Plan. This will be carried out by testing the auditing tool with outbreaks that have occurred recently in the Greater Manchester region. It will also include a review of the literature regarding the use of auditing in Public Health, and a comparison of Public Health England's Outbreak Plan auditing tool with those of homologous organisations in other countries.

## Charter 1

14:00

### Maternal and Child Health

Session title

Chair

Councillor Jane Black

#### Ref: 18 Oral

Coping mechanisms of obstetric fistula women in Uganda

Presenting author: **Joan Kabayambi**

Makerere University college of Health sciences, School of Public health, Plot 30A York Terrace, Kololo, Uganda.

Co-authors: Jolly Beyeza, Elizabeth Ekirapa, Justus Barageine, Joseph KB Matovu

**Background:** Governments and other stakeholders have made an effort to improve maternal health during the past decades, which has resulted in maternal health being prioritized as a Millennium Development Goal (MDG), the disability and suffering from obstetric fistula remains a silent and neglected issue in national and global health strategic plans. Continuous physical, emotional and social suffering associated with obstetric fistula has a profound impact on women's health. This paper explores the coping mechanisms of women living with obstetric fistula, and demonstrates how these mechanisms shape the identity and destiny of women affected by this condition. **Design/setting and participants:** A cross-sectional study was done in (January ) 2009 to explore the coping mechanisms of women living with obstetric fistula (OF) attending the vesico-vagina fistula (VVF) clinic in Mulago Hospital, Kampala, Uganda. Coping mechanisms were defined as ways and efforts used by women to deal with and manage the social consequences arising from living with fistula. A total of 30 women were purposively selected from among women attending the clinic and invited to participate in the study. Data were collected on age, sex, education, religious affiliation, and marital status. In addition, six key informant interviews (KII) and three focus group discussions (FGDs) were conducted with 20 individuals (health workers, spouses and attendants) were invited to participate in qualitative interviews on the coping mechanisms of women living with OF. Quantitative data were entered into an EpiData program and descriptive statistics were computed using SPSS version 17. Qualitative data were analyzed manually following a thematic framework approach. **Results:** A total of 30 women living with OF were interviewed. These women had lived with OF for a period ranging between 1 and 40 years. The mean age of the participants was 27 years (range: 13-69 years) and the mean and median age at the time they sustained fistula was 21 and 18 years respectively. Seventy two per cent of the women (n=30) developed OF at < 25 years; 62% sustained OF during their first pregnancy while 34% sustained OF between the 2nd and 6th pregnancy. When asked

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about how they cope with living with OF, majority mentioned that they keep clean and wash all the time (83%), 80% mentioned that they drink a lot of water to reduce the smell and sores due to the urine, while

75% reported that they ignore people's comments. Other forms of coping with OF included praying (57%); seeking refuge from the pastor in churches (30%); eating/drinking less (13%) and engaging in income-generating activities (8.9%). Findings from qualitative interviews indicate that it is important to be strict on hygiene, cleanliness padding and ignore people's words. Conclusion: Women living with obstetric fistula have two main coping mechanisms (problem focused and emotion focused) demonstrated by the themes generated from their responses.

## Charter 2

11:00

### Healthy Cities

Session title Tackling Public Health Priorities

Chair Stephen Michael Woods

### Ref: 271 Oral

Assessment for the effect of Healthy City Project in Panzhihua City

Presenting author: **Junming DAI**

Fudan University, School of Public Health, 138 YiXueYuan Road, Po Box 248, Shanghai, 200032, China.

Co-authors: Junling GAO, Chunru FAN, Xiaojun YAN, Hua FU

Aims: to identify the effect of healthy city project in PanzhiHua city in CHINA. Design: the quality interview and questionnaire survey used to assess the effect at the start and the end of healthy city project. Setting: there were communities, factories, schools and hospitals at Panzhihua city in the western of CHINA. Participants: all participants of interview or surveys completed questionnaire by self-administered with consent form. There were about 3000 residences attended the baseline survey and 1900 participants at the assessment survey. Results: there was not significant change at the self-evaluation of health scale between the baseline survey and this assessment survey. The rate of smoking among participants did not show change at this two surveys and the rate of try to stop smoking has increased. The environmental air quality has been improved and more participants believe this change is benefit for their health. The satisfactory rate for environmental quality has increased about 10%. The improvement of community health service has been praised by local residences and more health education courses have been welcome by residence interview comment. At the same time, the environmental quality still need keep on to improve especially for dust and noise control. Non-communicable diseases need pay more attention to prevent and control and health lifestyle need be advocated continually. Conclusions: the effect of healthy city project for three years has showed some effect at local and the healthy city project need continue to practice to improve environmental quality and health behavior.

**Ref: 391 Oral**

Is soccer the Brazilian 'national passion'? Frequency and distribution of the types of leisure-time physical activity in Brazil, 2011

Presenting author: **Thiago Herick de Sa**

Public Health School - University Of Sao Paulo, Av. Dr. Arnaldo, 715, 01246-904, Cerqueira Cesar, Sao Paulo, Brazil.

Co-authors: Leandro Martin Totaro Garcia; Rafael Moreira Claro

Author Request: Not for Publication

## Ref: 260 Oral

Non adherence to diabetic medication in Bangladesh: a public health warning for upcoming burden on the health system

Presenting author: **Dr. Md. Shamim Hayder Talukder**

Eminence, 3/6 Hena Nibash Asad Avenue, Mohammadpur, Dhaka-1207, Bangladesh.

Co-authors: Dr. Shams El Arifeen2, Dr. Peter Kim Streatfield2, Shusmita Hossain Khan1

**Background:** According to the International Diabetes Federation (IDF), diabetes poses a daunting challenge to the sustainable development of Bangladesh, as around 12% of the adult population in the country is estimated to be affected by either diabetes or prediabetes. The best way of dealing with this situation is prevention backed by effective management system of people already suffering from the disease. However, like many other developing country small scale evidence shows high rate of non adherence to diabetic medication in the country. **Objectives:** Based on the available evidence on rising prevalence of diabetes in the country, the Bangladesh demographic and health survey 2011 for the first time included testing for fasting blood glucose. The objective of this inclusion was to determine national status of this future development challenge. **Methods:** Women and men age 35 and older in 7543 households were sampled for blood glucose level tested. Blood glucose was measured using the HemoCue 201+ blood glucose analyzer in capillary whole blood obtained from the middle or ring finger from adults after an overnight fast. WHO (2006) cut-off points for measuring fasting plasma glucose was used for defining diabetes and pre-diabetes status. Along with any reported case with proper documentation was also taken under consideration for determining the prevalence rate. **Results:** The BDHS findings shows almost 60% of women and 65% of men are not aware that their plasma glucose levels are elevated. Five percent of women and men are aware that they are diabetic, have elevated blood glucose at the time of the survey, and are not treating it. More than one in five women and men are aware of their condition and are taking medication to lower the plasma glucose to normal values, but they are not successful in having it under control. Around 15% of women and 10% of men are aware that they have diabetes, are treating it, and have the plasma glucose level controlled within normal levels. **Conclusion:** Evidence shows that uncontrolled diabetes lead to critical complications and low level of awareness also indicates that only a minority proportion of people with diabetes get diagnosed and an even smaller proportion receives proper treatment. This can lead to many diabetic co-morbidities and create burden to the already lumbered health system of the country.

## Charter 2

12:40

### A Perspective from Fresh Minds

Session title ABSTRACT PRESENTATIONS

Chair Mr Neil Bodagh and Miss Patricia Hodgson

Ref: 718 Oral

Urban health themes in medical education: the medical student perspective

Presenting author: **Saad Javed**

University of Manchester, Stopford Building, Oxford Road, University of Manchester, Manchester, United Kingdom.

Co-authors: Healson Ihuoma, Francina Kwek, Taha Lodhi, Affaq Razzaq

Background and aims: Today, just over half of the world's population lives in cities. United Nations' estimates suggest this figure will rise to about two-thirds within the next 30 years. Such rapid urbanisation is predicted to create unique and major health challenges in both developed and developing countries. To meet the growing need for healthy cities, tomorrow's doctors will require a sound knowledge of urban health. With this in mind, we evaluated awareness of the determinants of urban health among medical students. Design: Cross-sectional survey. Methods: Medical students from all years were surveyed at three medical schools within the UK using a standardised questionnaire over November-December 2013. Incomplete responses were excluded. Results: 57 questionnaires were completed. Of these students, 59.7% had not heard of the term urban health and 71.9% admitted they did not understand what study of urban health involved. Regarding current inclusion of urban health in the medical school curriculum, 73.7% felt coverage was insufficient and 15.8% were indifferent. When asked about issues related to urban health, the students were least aware of the impact of climate change (64.9%), environmental health (49.1%), transport issues (49.1) and economics (47.4%) on urban health. Awareness of the effects of alcohol, tobacco and drugs (96.5%) and chronic diseases (89.5%) on urban health was particularly high. Despite the low coverage in the curriculum, 78.9% of medical students felt that a good understanding of urban health would be useful for their future careers and 61.4% of the students revealed they would like to learn more about urban health. Conclusion: Although the significance of urban health as a healthcare challenge is being emphasised in the medical community, the awareness of urban health and associated issues remains low among medical students. Medical students recognise the importance of a sound understanding of urban health for their future careers. However, it appears that the topic is only sporadically covered in the medical school curriculum, leaving certain key related themes largely neglected. It is suggested that clearer guidance should be provided on the major themes related to urban health in the medical curriculum. This may enhance students' understanding of the urban determinants of health and better prepare them for future practise.

**Ref: 788 Oral**

Faith, Faith Healing and HIV: the impact on the use of antiretroviral therapy in HIV positive migrants living in the UK

Presenting author: **Winifred Garr**

University of Manchester, Flat 4, 9 Wilbraham Road, Manchester M14 6JS, United Kingdom.

Co-authors:

Our understanding of HIV infection has improved dramatically in the last thirty years; and despite a continued and substantial global burden, current antiretroviral therapy (ART) has for many turned a once fatal condition into a manageable chronic illness. The two groups most affected by HIV infection in the UK are black Africans and men who have sex with men. Though faith as a construct has varying interpretations, it features in the lives of many people living with HIV in the UK, particularly the black African members of the population. The role of faith as a coping mechanism in HIV is well-documented; and for the most part the relationship between faith and health is a positive one. Problems originate from the existence of misinformation. It reinforces stigma; and in the case of an increasing number of faith healing claims across the UK, it impedes access to vital ART. The cessation of treatment in response to such claims puts those infected with HIV at risk, and has claimed a number of lives. It is clear there is a need to engage with faith groups. Providing education is a step in bridging this gap between religion and health. As a truly holistic approach to patient care it is required in order to reach not only those most affected by HIV infection, but also those most at risk. An awareness of these issues is essential for all healthcare professionals in order to ensure and promote good adherence to ART.

**Ref: 795 Oral**

Viral meningoencephalitis in adults

**Presenting author: Neil Bodagh**

University of Manchester, Oxford Rd, Manchester M13 9PL, United Kingdom.

Co-authors: Riina Rautemaa-Richardson

Meningitis refers to an infectious neurological disease that is characterised by inflammation of the meninges. Encephalitis indicates the involvement of brain parenchyma. These conditions are medical emergencies which need to be managed urgently. Meningitis and encephalitis can coexist in meningoencephalitis. When these conditions are suspected, empirical treatment must be commenced as soon as possible. Several pathogens can cause these inflammatory processes and it has been shown that the definitive diagnosis of the pathogenic organism can improve the prognosis of patients. Our case report describes a 33 year old female patient who presented with fever, headache, photophobia, myalgia and general malaise. Approximately 4 days prior to presentation, she had noticed painful genital lesions. The patient's lumbar puncture results revealed that her condition was likely to be caused by a virus. Subsequently, polymerase chain reaction was performed isolating herpes simplex virus 2 as the causative organism. The aim of this presentation is to provide an overview of the viruses that most commonly cause meningoencephalitis in adults. The herpesviruses, enteroviruses and arboviruses are some of the most frequently identified pathogens. This presentation describes these viruses highlighting their key clinical features as well as their routes of transmission. The treatment regimens differ according to each virus and these specific regimens are described. We also look at how we may be able to treat and prevent these infections in the future.

**Ref: 805 Oral**

meningococcal B vaccine: If the price is right

**Presenting author: Patricia Hodgson**

University of Manchester, University of Manchester Oxford Road Manchester M13 9PL, United Kingdom.

Co-authors:

Author Request: Not for Publication

## Charter 2

14:00

### Healthy Cities

Session title	Is there a future for cities?
Chair	Professor John Ashton

Ref: 248 Oral

Using epidemiological and spatial data to examine accessibility to a suburban healthy food basket

Presenting author: **Dr Shaun Scholes**

Epidemiology & Public Health, University College London, 1-19 Torrington Place, Department of Epidemiology & Public Health, University College London, WC1E 7HB, United Kingdom.

Co-authors: Ashley Dhanani, Laura Vaughan, Sadie Boniface, Jennifer Mindell

**BACKGROUND:** Access to healthy food depends on availability (retailers' location, food options sold, prices) and people's ability to travel there and back. Research on the availability, accessibility and price of healthy foods in local environments has typically ignored where residents actually purchase food and their motivations for shopping there. Our inter-disciplinary research investigates how spatial setting and social context influence levels of access to commonly purchased healthy foods. **DESIGN & SETTING:** Epidemiological and spatial data has recently been combined to understand the spatio-cultural practices of food shopping within a suburban town centre in north London. In partnership with a Jewish secondary school, survey data on food purchasing (which items of a short basket of healthy foods were purchased within the last fortnight and from which shops) were completed by parents of Year 9 pupils (13-14y) either through paper survey returns or via an online survey tool. A census of local shops was also undertaken to ascertain the availability and prices of the food basket items. Survey data were geocoded and combined with street network and land use data. Data were then transformed using Geographic Information Systems (GIS) to facilitate space syntax network analysis in order to quantify and describe distances from participants' home address to local shops. **RESULTS:** The data are currently being analysed. Preliminary analyses from initial data processing and visualisation through mapping shows the location of the school may be the most important factor influencing where food is purchased. The large supermarket located adjacent to the school was the most frequently visited shop. This suggests that daily movement routines such as dropping-off and picking-up children from school are combined with other routines, in this case food-shopping, to maximise the efficiency in time and travel distance to complete other daily tasks. This pattern of convenience shopping, however, did not apply to the purchasing of food items requiring kosher certification. Despite kosher foodstuffs being available in the adjacent supermarket, the results show that people are willing to travel further, beyond the boundaries of their immediate neighbourhood, to purchase kosher food in specialist shops and delicatessens. **CONCLUSIONS:**

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Integrating primary data collected from local citizens with various types of spatial data has revealed the influences of often overlooked but crucially important factors on accessibility to healthy foods. Our

innovative and participatory case-study shows that epidemiological and spatial data can be successfully combined to understand the relationships between the spatial practices of food shopping and the socio-cultural motivations for specific shopping practices.

**Ref: 295 Oral**

PPP-case Zwolle Healthy City, The Netherlands

Presenting author: **prof dr J.J.M. ten Dam**

Windesheim University of Applied Sciences, PO-box 10090 8000 GB Zwolle, Netherlands.

Co-authors:

In Zwolle Healthy City exists since 2011 a public private partnership between 6 public organisations and 9 local based private companies. They contribute to the local program with money, expertise, strategic power, communication and youth activities. In 2012 one of the companies suggested to realize a so called Sutu in two of the priority neighbourhoods (where overweight and obesity rates are high). A Sutu is an interactive soccer wall, where a ball is kicked at a computerized object. It represents the Ottawa-charter: make the healthy choice the easy choice (and adjust the environment). If children like computer games, don't send them away from the screen, but replace the screen to the open field and let them play with it in an active way. The idea was embraced by all the partners and together with the community principals they raised 150.000,-. The first Zwolle Sutu was opened in October 2013. The public organisations have promised that they organize attractive, social activities in and around the Sutu's. The public-private partnership was intensified and improved by this mutual goal because everybody could contribute to the project with their own, unique qualities. The companies financed and adopted the SUTU-wall and the public parties organized more activities in the park. In June 2013 Zwolle presented the results of a three year monitoring survey indicating that the overweight rates under children up to 12 year have been declined since 2009 with several percents. In this presentation we will give an overview of Zwolle Healthy City by a 4 minutes movie and will we will explore the public private partnership in the city.

## Ref: 488 Oral

Innovation and change in the local health promotion system : the case of healthy cities in Seoul, Republic of Korea

Presenting author: **Jinhee Kim**

Graduate School of Public Health, Seoul National University, SNU Graduate School of Public Health Bldg 221. Rm 310 Daehak-dong Gwanak-gu Seoul 151-015, Korea South.

Co-authors: Yoonjung Han, Seunghyun Yoo

Innovations to urban health issues are needed to address the challenges and social determinants of health in the 21st century. The healthy cities approach is in itself an innovation for local governments to take a stronger leadership and change the way of working for health, and is also a platform for other policy innovations for local health. In the Republic of Korea, the healthy cities approach was introduced through the four founding members of the Alliance for Healthy Cities in 2003. The approach has gained nationwide attention and spread to more than 70 healthy cities in ten years. The initiative taken by local governments to adopt the healthy cities approach is a unique case in Korea, considering the traditional health promotion policy context where the central government introduces new policies which are implemented through the local governments. In the local governmental level, health promotion policies are under the responsibility of the community health centers, which are equivalent to local health departments. In most cases, healthy cities is introduced through community health centers. When innovations such as healthy cities are introduced into the local health promotion system, the principles and concepts of these innovations need to adapt to the local system and context that it is entering. Reversely, the existing health promotion system adapts in response to the changes made by the innovation. Political and organizational factors are among key influences that affect the introduction, implementation and institutionalization. This qualitative study examines the introduction and implementation process of the healthy cities approach in four districts in Seoul, selected to represent the different types according to duration, organizational characteristics, major projects, budget, etc. For each case of this multiple case study, we examine how and why the healthy cities was introduced, and how it has evolved in mutual interaction with the existing local health promotion system. The study utilizes a combination of document analysis, in-depth interviews, and focus group discussions to examine the research inquiry and triangulate the findings. Healthy cities plans and reports were reviewed for the document analysis, and 17 managerial and field staff responsible for healthy cities and health promotion in the four cases were interviewed. Data was transferred to codes and further developed to meaningful themes. To attain trustworthiness, the findings were verified through four focus group discussions. The results of this ongoing research will provide practical strategies on implementing the principles of healthy cities within the local context, while offering opportunities and challenges for the adaptation of innovations. The findings will offer insight and direction not only for healthy cities but for future innovations that will continue to be introduced to health promotion systems to address urban health challenges.

## Ref: 553 Oral

Maternal and Child Health in Nairobi Slums: Evidence from the 2000 and 2012 Nairobi Cross-Sectional Slum Surveys

Presenting author: **Jinhee Kim**

African Population and Health Research Center, APHRC Campus, Manga Close off Kirawa Road, Kitisuru, Kenya.

Co-authors: Mberu, B.; Kabiru, C.; Beguy, D.; Oyolola, M.; Wamukoya, M.;

**Aims:** Wide health disparities between urban slums and other areas will push country indicators off track unless there are targeted interventions in urban slums. Maternal mortality in Nairobi slums, for example, was estimated at 706/100000 between 2005 and 2009, exceeding the national average of 488/100000. Child health indicators have been shown to have lagged behind those of other parts of the city and rural areas. Considerable investments have been made to improve maternal and child health in urban slums. We investigate whether these investments have bridged the maternal and child health equity gap between slums and non-slums. **Design and setting:** Data are derived from the Nairobi Cross-sectional Slums Surveys conducted in 2000 and 2012. Interviews were conducted among a random sample of 3256 women aged 15-49 years and 1683 males aged 12-24 in 2000 and 4240 women aged 12-49 and 2377 males aged 12-54 in 2012. This study focuses on women ages 15-49 years who reported a live birth in the three years preceding the survey. The maternal health analyses focus on the last birth while child health analyses focus on all children born in the three years preceding the survey. **Participants:** Interviews were conducted among 3256 women aged 15-49 years in 2000 and 3892 similar women in 2012 covering 1219 and 1746 live births respectively. **Results:** In 2012, 96% of women were seen by a health professional during antenatal care (ANC) visits, a slight increase since 2000. The median number of ANC visits remained constant at 4 visits while the median gestation at time of first ANC visit improved from 6 months in 2000 to 5 months in 2012. More women (81%) reported delivering at a health facility in 2012 compared to 2000 (52%) while fewer women in 2012 (8%) than in 2000 (25%) received delivery assistance from TBAs. For child health indicators we see an increase in the proportion of babies with low birth weight (3% in 2000 compared to 5% in 2012). Considering the proportion of children fully immunized at the age of one year, the 44% immunization coverage rate remains below the national immunization coverage target of 85%. There is a four-fold increase in the proportion of children who received no immunization. The prevalence of cough, fever and diarrhea was lower in 2012; while the proportion of children with these conditions who were taken to a health facility remained constant for cough and fever but declined for diarrhea from 58% to 43%. In 2012, only 6% of mothers reported increasing fluid intake in children with diarrhea, compared with 35% in 2000. **Conclusions:** Although, notable gains in maternal and child health indicators were recorded in the inter-survey period, additional efforts are needed to reach women receiving antenatal and delivery care from TBAs, those not receiving any ANC, and those not taking their children for immunization. Programming around child health should include awareness campaigns on diarrhea management.

## Charter 3

11:00

### Urban Planning and Architecture

**Session title** Small area research for improving urban health

**Chair** Professor Larry Frank

#### Ref: 621 Oral

Exploring associations between urban green, built environment configuration and walking: Results from the Greater London boroughs

Presenting author: **Dr Chinmoy Sarkar\*** \*Department of Primary Care and Public Health, Centre for Health Sciences Research, School of Medicine, Cardiff University, Cardiff, CF14 4XN, United Kingdom.

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Co-authors: Dr John Gallacher\*, Prof. Chris Webster\*\* \*Department of Primary Care and Public Health, Centre for Health Sciences Research, School of Medicine, Cardiff University, Cardiff, CF14 4XN, United Kingdom. \*\* Faculty of Architecture, The University of Hong Kong

Abstract: In recent years, lack of requisite physical activity has been identified as a key determinant of obesity and associated chronic diseases. In this paper, we examine the associations between objectively measured urban green and walking behaviour and how such associations are mediated by built environment configuration and street-level physical accessibility. The dwelling locations of the respondents of London Travel Demand Survey were geocoded and individual walking behaviour was extracted from the travel diary. The UK Map data was employed to calculate accessibility to urban green; expressed in terms of density of natural green, agricultural and anthropogenic green as well as street trees within defined buffers. A 0.5 metre resolution normalized difference vegetation index was employed to operationalize the degree of greenness. A network model of street-level physical accessibility was developed using spatial Domain Network Analysis (sDNA). A two-part multi-level regression model was employed with individuals nested within census-defined lower super output areas. The results show a significant influence of both urban green and street-level accessibility highlighting the need for targeted intervention strategies in the activity-friendly planning and design of urban built environment.

**Ref: 290 Oral**

Toxic High Streets

Presenting author: **Tim G Townshend**

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Co-authors:

Traditional shopping streets in England have changed out of all recognition in the last decade. In some areas the traditional grocers, bakers and butchers have been replaced by coffee shops, chi-chi bistros and shops selling 'lovely little things'. However, the story is very different in many lower socio-economic status (SES) neighbourhoods. These have experienced an unprecedented growth of a toxic mix of, high interest money lenders, betting shops and nutritionally poor fast-food restaurants, among other unhealthy uses. There is increasing evidence that these places are not just unpleasant, they are harmful to physical and mental health. For example, while the exact links between environmental exposure to fast food, consumption and health outcomes are complex (Lake et al., 2014) research has begun to highlight the deleterious effect exposure can have on maintaining a healthy diet, particularly for certain groups in society such as adolescents (Sinclair and Winkler, 2009). Other uses 'flourishing' in lower SES neighbourhoods, such as betting shops and money lenders are linked to poor mental health. Even if impacts are small, felt over many generations and whole communities they are significant. National planning policy (NPPF) calls on planning authorities to develop policies that promote 'healthy communities'. Tackling the unhealthy uses that have established themselves on high streets will not be easy or straightforward. Policies to restrict uses may have some currency. A number of local authorities have been working on restricting fast-food takeaways (see for example Barking and Dagenham, 2009). However, even if restrictive policies are successful it is unlikely they will be the whole answer. More proactively planning needs to fundamentally rethink these areas and what they offer to the communities they serve. References: Lake, A. A., Townshend, T. G. & Burgoine, T. 2014. Obesogenic Environments In Public Health Nutrition. In: Lanham-New, S. (Ed.) The Nutrition Society Textbook Series Oxford: Wiley-Blackwell,. London Borough Of Barking And Dagenham 2009. Saturation Point: Addressing the health impacts of hot food takeaways. Draft Supplementary Planning Document. London: London Borough of Barking and Dagenham. Sinclair, S. & Winkler, J. 2009. The School Fringe, From Research to Action. Policy Options within Schools on the Fringe. London: Nutrition Policy Unit, London Metropolitan University.

## Ref: 791 Oral

Does where you live matter for health in the most densely populated city in the world? Social Cohesion and Health-Related Quality of Life in 388 Hong Kong neighbourhoods

Presenting author: **Ni MY (Dr. Michael Y. Ni)**

University of Hong Kong School of Public Health, 5/F, William Mong Block, 21 Sassoon Road, Pokfulam, Hong Kong SAR, China.

Co-authors: Mak T, Schooling CM, Leung GM

**Introduction:** Neighbourhood studies which distinguish the compositional ('the difference that people make to neighborhoods') and contextual effects ('the difference that neighborhoods make to people') on health are potentially useful for urban planning. Using the FAMILY Cohort, we aim to identify the compositional and contextual effects of social cohesion on health-related quality of life (HRQoL).

**Methods:** A territory-wide random sample of households was surveyed from 2009-2011 in Hong Kong. A household was enrolled when all family members agreed to participate in the survey. We defined a neighbourhood as a District Council Constituency Area, which consists of about 17,000 residents in a geographically contiguous region. Using multilevel models, we examined the adjusted association of neighbourhood social cohesion (assessed from mean self-perceived social cohesion by neighbourhood) with HRQoL, measured by the mental (MCS) and physical (PCS) component score of the SF-12. Multiple imputation was used for missing values in socioeconomic position (household income, education, occupation, housing type). **Results:** We conducted multilevel analyses on 17,441 participants aged = 15 years nested within 7,886 households and 388 neighbourhoods (94.2% of all neighborhoods in Hong Kong). Between-neighbourhood variance accounted for 1.3% of total variance in MCS and 0.4% in PCS, adjusted for age, sex, marital status, nativity, and socioeconomic position. Neighbourhood-level social cohesion was significantly associated with MCS (standardized regression coefficient of 0.22, 95% confidence interval (CI) 0.14 to 0.30), but not with PCS (0.03, 95% CI -0.04 to 0.09), adjusting for the same individual-level factors. The association remained similar after additionally adjusting for neighbourhood-level socioeconomic attributes (median household income and income inequality). The association for MCS was slightly attenuated (0.12, 95% CI 0.04 to 0.20), after additionally adjusting for individual-level self-perceived social cohesion. **Conclusion:** Our findings demonstrate that social cohesion at the neighbourhood-level is associated with the mental component of HRQoL, but not the physical component, even after adjusting for individual and neighbourhood-level factors, including individual self-perceived social cohesion. This suggests contextual influences specifically on mental HRQoL, where neighbourhoods with higher social cohesion had better individual mental HRQoL. Future studies could identify how the built environment improves social cohesion within neighbourhoods.

## Charter 3

12:40

### A Perspective from Fresh Minds

Session title ABSTRACT PRESENTATIONS

Chair Miss Cima Dailami and Mr Mehfuz Patel

#### Ref: 738 Oral

Eating And Dieting Behaviours In Urban-Rual Adolescents: A Cross-National Study Between Scotland And Canada

Presenting author: Arsa Syed

University of Manchester, University of Manchester, Oxford Road, Manchester, United Kingdom.

Co-authors: Joanna Inchley, Rakeeb Patel

**SETTING:** Obesity is questionably one of the most pressing concerns of this century. Adolescence is a crucial point where eating and dieting behaviours develop; tackling unhealthy behaviours within this age group may reduce the chances of developing obesity and/or eating disorders. **AIMS:** This study aims to identify differences in eating and dieting behaviours in urban and rural adolescents, within and between Canada and Scotland. **DESIGN:** This project uses data from the Health and Behaviour in School-aged Children (HBSC) study. The variables taken into focus were breakfast consumption, food frequency questions and dieting behaviours. Statistical analysis was done using IBM SPSS Statistics 21.

**PARTICIPANTS:** The study sample included a total of 22, 690 adolescents aged between eleven and sixteen: 6,771 were from Scotland and 15, 919 from Canada. **RESULTS:** Within Scotland, a larger proportion of rural adolescents ate breakfast on weekdays ( $p < 0.001$ ), and consumed vegetables ( $p < 0.001$ ) and fruits ( $p < 0.001$ ) daily. A larger proportion of Scottish urban adolescents consumed sweets ( $p < 0.01$ ), crisps ( $p < 0.01$ ) and soft drinks ( $p < 0.001$ ) daily. Within Canada, a larger proportion of urban adolescents ate breakfast on weekdays ( $p < 0.001$ ), and ate more fruits ( $p < 0.001$ ) and vegetables daily ( $p < 0.001$ ) daily. A larger proportion of Canadian rural adolescents consumed chips ( $p < 0.001$ ) and soft drinks ( $p < 0.001$ ) daily. More Canadian urban adolescents brush their teeth daily ( $p < 0.001$ ). Between the two countries, Canadian adolescents ate more vegetables and fruits daily ( $p < 0.001$ ). Scottish adolescents ate breakfast on weekdays more regularly ( $p < 0.001$ ). A larger proportion of Scottish adolescents were on a diet ( $p < 0.001$ ) and brushed their teeth on a daily basis ( $p < 0.001$ ). More Scottish adolescents consumed sweets ( $p < 0.001$ ), chips ( $p < 0.001$ ), crisps ( $p < 0.001$ ) and soft drinks ( $p < 0.001$ ) daily. **CONCLUSIONS:** Our findings have shown inequalities between urban and rural adolescents in both countries and highlight the need for policies to improve the eating behaviours of Scottish urban, Canadian rural and also the general Scottish adolescent population. It also highlights the implications of dieting in girls in both countries and the need for promoting healthy weight-reduction behaviours among girls.

## Ref: 821 Oral

Let's BASHH it out. Are the BASHH guidelines for HIV testing in secondary care in Greater Manchester effective?

Presenting author: **Hassan Ahmad**

University of Manchester, 10 Victoria Road M14 6AP, United Kingdom.

Co-authors: Dr Vinay Bothra

The objective of this study is to examine the HIV testing protocol enforced in the 4 big hospitals trusts in the Greater Manchester region, (MRI, Salford Royal, Wythenshawe and North Manchester General) and determine whether the BASHH guidelines have been effective in promoting an increased HIV test uptake. This will be done by collecting quantitative raw data to see whether there has been any significant change in the uptake in testing since the guidelines have been introduced. The project will also look at the current barriers and facilitators facing the medical teams at these sites and recommendations will be provided (if improvement is required) taking evidence from a literature search as to how to improve the service. This is of particular importance as both Manchester and Salford currently have the 2nd and 3rd highest HIV prevalence rates outside of London.

## Ref: 822 Oral

What is the impact of community-based, Phase IV cardiac rehabilitation on participants' health behaviours and quality of life?

Presenting author: **Cima Dailami**

The University of Manchester, The Undergraduate building, Education North, Manchester Royal Infirmary, Oxford Road, Manchester, M13 9WL, United Kingdom.

Co-authors: Dr Gozde Ozakinci, PhD (University of St Andrews)

**Background:** Cardiac rehabilitation is a well-established programme to assist those recovering from cardiac events through the means of exercise training, education on behaviour modification and psychological counselling. There has been substantial research on the benefits of the first three phases of the programme; however, there is little regarding attendees' experiences of the long-term final phase.

**Objective:** To investigate the experiences of long-term attendees of community-based, Phase IV cardiac rehabilitation. **Methods:** Participants from a St Andrews community-based, Phase IV class were recruited for an interview; thirteen participants in total (12 males and 1 female). Participants filled in a short paper questionnaire; information was collected regarding their diet and lifestyle, self-assessed health, perceived stress and exercise regime. Interviews were then held to examine participants' experiences of their cardiac event, previous phases of rehabilitation and experiences of the Phase IV class they currently attend. **Results:** Key themes identified in the interviews included: participants' perceptions of their cardiac health, the psychological and family impact of cardiac events, physical and social benefits of Phase IV rehabilitation, support gained from Phase IV, and motivation to maintain long-term attendance. All thirteen participants reported experiencing significant benefits, both physically and psychologically, from attending Phase IV. The average participant had a BMI of 26.3, which falls into the category of overweight (25-29.9 BMI). No excessive alcohol consumption was reported and only one participant was a current smoker. The average daily consumption of fruit/vegetables was 3 portions (minimum 1, maximum 6). Overall, self-reported health was good and the average perceived stress score was 3.38 (minimum ie no stress 0, maximum 13). All participants reported to exercising on average 6 times per week; varying from mild to strenuous exercise. **Conclusion:** This study shows that there is a significant positive impact of community-based, Phase IV cardiac rehabilitation on participants' health behaviours and quality of life. However, more extensive studies are needed to clarify these findings in a larger Phase IV participant population and how it can support weight management and long-term behaviour change.

**Ref: 825 Oral**

Promoting HIV testing uptake in Primary Care: A Manchester Perspective

Presenting author: **Mehfuz Patel**

University of Manchester, Stopford Building, Oxford Road, Manchester, United Kingdom.

Co-authors: Vinay Bothra

As part of a Personal Excellence Path (PEP) this project will explore the the possibility of expanding HIV testing throughout Primary Care in the Manchester area. In the UK there are an estimated 96,000 people living with HIV, of these 24% of these are unaware of their infection - not only are they unable to gain the benefit of early diagnosis and HAART they are potentially putting their partners and risk of HIV. Manchester with a prevalence of 5.66/1000 has the second highest prevalence of HIV outside of London and thus is an area 'high prevalence' and as per the CMO and HPA it is recommended that there are increased levels of testing in these areas. This paper will explore if Manchester is achieving the recommended testing levels, by analysing data collected from GP practises in the area on the extent of testing any strength and gaps will be identified allowing exploration of what barriers exist in testing and what recommendations can be put forward to overcome these barriers and then promote higher rates of HIV testing - ensuring that these recommendations are tailored to Manchester and the needs of its population and healthcare providers.

## Charter 3

12:40

### Urban Planning and Architecture

Session title Planning for urban areas

Chair Professor Billie Giles-Corti

#### Ref: 766 Oral

Exploring the impact of urban structure and architectural pattern in sustainable development and reducing energy consumption with comparing two different climate in Iran ( Boushehr City in hot and humid climate and Paveh in cold and mountainous climate)

Presenting author: **Soheil Izadi**

university of kordistan, university of kordistan , sanandaj , IRAN, Iran.

Co-authors:

Abstract: city's relationship with its surrounding region and climate has always been one of the main issues of sustainability. Traditional urban structure, has been compatible with the environmental and the climatic conditions and with creating a sustainable and suitable environment for human life, is formed in accordance with the principles and methods that not only doesn't inflict damage and injury on environment but also put conservation of natural resources, lack of environmental pollution, using less fossil energy and symbiosis with natural and climate conditions on its agenda. in this article we will try to consider the city design and the traditional architectural guidelines in two different climate to be addressed sustainability and reduce fossil energy consumption. Key words: climate , energy, sustainable development , urban structure.

## Ref: 164 Oral

The evaluation of an urban renewal program and its effects on health and health inequalities in Barcelona (Spain)

Presenting author: **Roshanak Mehdipanah**

Public Health Agency of Barcelona, Plz Lesseps 1, Spain.

Co-authors: Carme Borrell, Carles Muntaner, Davide Malmusi, Maica Rodriguez-Sanz

**Background and aims:** Large-scale urban renewal projects are gaining importance as a way to improve the physical, social and economic situations of deprived neighbourhoods with bad housing conditions, rundown areas and consequently poor health. However, due to their complexity and limitations in evaluation methods, there is little evidence linking their effects to health and health inequalities. The objective of this research was to address some of these limitations by using a mixed-method approach to study an urban renewal policy implemented in Barcelona (Spain), the Neighbourhoods Law (NL), and its potential effects on the health and health inequalities. **Settings:** The NL, the biggest urban renewal program in Spain, was launched in 2004 by the Catalan regional government. Funding was provided for approximately 148 deprived neighbourhoods that proposed renewal projects addressing physical and social problems. **Methods:** A quasi-experimental design was used to study health and health inequalities at the pre- (2001, 2006) and post-intervention (2011) periods in 5 intervened neighbourhoods in Barcelona while comparing them to 8 non-intervened neighbourhoods with similar socioeconomic characteristics. The sample (15 years or older residents) was taken from the Barcelona Health Survey. Poisson regression models were used to estimate the prevalence ratios and their 95% confidence intervals for fair/poor self-rated health and poor mental health (GHQ-12) in men and women. The analysis was also stratified by occupational social class to study health inequalities. We also used Concept Mapping (CM), a qualitative method, to explore the perceptions of 3 groups of residents in 2 intervened neighbourhoods, towards changes that had occurred in their neighbourhoods and their effects on wellbeing. CM consists of 6 steps based on responses to a focus question which are then used to create conceptual maps reflecting the perceptions of the group as a whole. **Results:** Self-rated health in both women and men improved significantly from 2006 to 2011 in the intervened group while there were no significant changes in the comparison group. In women, from 2006 to 2011 a significant decrease of poor mental health was observed in the intervened group, while a significant increase of poor mental health occurred in men within the comparison group. When stratified by social class, poor self-rated health decreased significantly only in women from manual class living in the intervened neighbourhoods. CM complemented the quantitative study by incorporating stakeholders' input where residents perceived that the majority of the NL's projects had both positive and important effects on their wellbeing. **Conclusions:** The NL had a positive effect on health and health inequalities, thus supporting the general theory of urban renewal resulting in health benefits. The use of mixed methods in evaluation contributes to the understanding of how, why and for whom large-scale programs work.

**Ref: 633 Oral**

What It Takes To Be In A City: A Study Of Linkages Between Urbanisation And Health In India

Presenting author: **RAKESH CHANDRA**

Jawaharlal Nehru University New Delhi, Jnu, New Delhi, India.

Co-authors:

In this study, we examine linkages between exclusionary urbanization process and health through certain pathways, i.e. material, psychological and behavioral. This study is placed in an urban village of Varanasi, which historically suffers socio-spatial exclusion. The study is built on sequential exploratory research design, a genre of mixed methodology of research. A total of 150 adult men participated in two phase of data collection, accomplished through in-depth interviews, group discussions and a questionnaire based survey. The data collected in different faces were combined and analysed together to get a complete picture of current scenario. The inhabitants of the study area remained segregated from its urban surrounding socially and spatially and denied of even basic amenities. They suffered health problems originating from insanitation and poverty. Their perception was controlled by old rural values and experiences; and practices were curious mix of rurality and urbanism.

## Cobden 1

11:00

### Health Protection / Screening and Prevention including vaccinations and immunisations

Session title **ABSTRACT PRESENTATIONS**

Chair **Dr Artitaya Lophatananon**

**Ref: 224 Oral**

Knowledge and acceptance of human papilloma virus vaccination among female medical and dental undergraduate students in Benin-City, Nigeria.

Presenting author: **Vivian Omuemu**

University of Benin, Benin-City, Edo State, Nigeria, Department of Community Health, College of Medicine, University of Benin, PMB 1154, Benin City, Edo State, Nigeria., Nigeria.

Co-authors: Amenze Onowhakpor, Luisa Osagie, Gideon Odili.

**Background:** Human Papilloma Virus (HPV) infection has been implicated as a necessary cause in the development of almost all cases of cervical cancer which is the second most common cancer worldwide.

**Objective:** This study aimed to determine the knowledge, acceptance and uptake of human papilloma virus vaccination among female medical and dental undergraduate students in Benin-City, Nigeria.

**Methods:** This descriptive, cross sectional study was carried out among a total population of female medical and dental undergraduate students of the University of Benin, Benin-City. The tool for data collection was a pre-tested, semi-structured, self-administered questionnaire which sought to determine the level of knowledge, acceptance and uptake of HPV vaccination. Data was analyzed using SPSS 16.0 and significant level was set at  $p$  less than 0.05. **Results:** A total of 215 female medical and dental undergraduate students with mean age of  $22.4 \pm 3.0$  years participated in the study. One hundred and eighty-three (85.1%) of the respondents were aware of HPV infection and of this 84.2% knew that the HPV vaccine exists to prevent the infection while 74.9% knew that three doses were required for protection against the virus. Seventy-seven percent of them knew that the vaccine is available in Nigeria. More than 75% of the respondents were willing to receive the vaccine if it were free and if it was recommended by a doctor (79.8%). Almost half of them (49.2%) believe that the vaccine was safe while 44% are of the opinion that the vaccine has been widely tested and effective. Eight (3.7%) of the respondents had ever received the vaccine and of this, only 2 (25%) of them had received three doses of the vaccine. Good knowledge of the vaccine increased with age ( $p = 0.001$ ) and was higher among the medical than the dental students ( $p = 0.014$ ). **Conclusion:** The study has revealed that a gap exists between the level of knowledge and uptake of HPV vaccination among the study population. It is recommended that the government should be more committed to subsidizing the cost of the vaccine so as to increase its uptake.

Ref: 629 Oral

Health-Seeking Behavior and Participation in a National Measles Mass Immunization campaign in a Philippine Urban Setting: A Cross Sectional Study

Presenting author: **Apostol, Gemin Louis C.**

Ateneo School of Medicine and Public Health, Ateneo School of Medicine and Public health, Eugenio Lopez Jr. Complex, Ortigas Ave., Pasig City, Philippines.

Co-authors: Anne Clarisse C. Carlos, Christoph Anton T. Habaluyas, Irene Kristine Lukban, Romjie U. Luy, Cezar Jaime Ortiz

**BACKGROUND.** Measles ranks ninth among the Philippines' leading causes of morbidity in children under five. Despite the wide availability of measles vaccines and the accessibility of a national mass immunization program (Ligtas Tigdas), participation in urban households remains low, preventing adequate coverage and achievement of herd immunity. **METHODOLOGY.** The Andersens Model for Health seeking behavior was used to determine the influence of predisposing, enabling and need factors on the participation of urban households in the recent National Measles Mass Immunization Program. Data was collected through a survey of 337 households in Metro Manila and analyzed using bivariate and multiple logistic regression through EpiInfo. Focus group discussions and key informant interviews were also done to qualify empirical data and provide insight to health beliefs and notions. **RESULTS.** Majority of the participants of the study were mothers (63%) followed by hired caretakers/nannies (16%). Low income households were more likely to participate in mass immunization campaigns (PR=2.6, a: 0.05) compared to middle-income (PR=0.3) and high income households (PR=0.04). Among those who did not participate, the common reasons were personal preference (74.2%) and lack of awareness of program details (61.6%). Those who found the house to house approach acceptable (PR=1.5) as well as administration by a local health center doctor (PR=1.9) were likely to participate. Those who preferred a more individualized approach (PR=0.1) and a private physician (PR=0.1) were unlikely to participate. Participating households perceived the program to be highly beneficial (PR=5.2) but admitted that they are likely to participate in future implementations (PR=0.3). **CONCLUSION.** Mothers continue to be the main decision-maker as regards to participation in mass immunization campaigns but the growing mobility of mothers and their absence in urban households accompanied by the increasing role of hired caretakers (nannies) as gatekeeper should be recognized by direct campaign implementers. Contrary to previous studies, low-income households are more likely to participate, but there is a passive kind of participation brought about by social pressure. Empowerment and better access to information should thus be provided in these areas. Resistance in participation among middle and high income households is primarily due to personal preferences. And while such programs were perceived as beneficial, what is beneficial is not necessarily availed due to these personal preferences. Marketing and promotional strategies should thus be targeted to meet these preferences to ensure better immunization coverage and herd immunity.

**Ref: 717 Oral**

Prostate cancer surveillance - a risk based approach in primary care

**Presenting author: Artitaya Lophatananon**

Population Health, Institute of Population Health, University of Manchester, United Kingdom.

Co-authors: Cezary Cybulski, Jan Lubinski, Jonathan Rees, Fulford Graham, Fulford Sue, Baxter-Smith Dorothy, Smith D, Baxter-Smith David, Kenneth Muir

Author Request: Not for Publication

**Ref: 781 Oral**

Epidemiology of chronic infectious/non-communicable diseases and multi-morbidity in an informal peri-urban setting in Cape Town, South Africa

Presenting author: **Dr Tolu Oni**

University of Manchester, Room 2.525 Stopford Building Oxford Road Manchester M13 9PT, United Kingdom.

Co-authors: tolullah.oni@uct.ac.za

Author Request: Not for Publication

## Ref: 102 Oral

Safety Evaluation of the Vaccines used in Routine Immunization Programme in two South-eastern States of Nigeria

Presenting author: **Oli Angus Nnamdi or Oli Ugochukwu Chinedum or Ikegbunam Moses Nkechukwu**

Nnamdi Azikiwe University, Department of Pharmaceutical Microbiology and Biotechnology, Faculty of Pharmaceutical Sciences, Agulu Campus, Anambra State, Nigeria.

Co-authors: Agu Remigus Uchenna, Oli Ugochukwu Chinedum, Nwoye Charles Ugochukwu, and Esimone Charles Okechukwu

**Aims:** The study sets to determine how safe the routine immunization vaccines used in Abia and Imo States of Nigeria are. **Design:** The study was designed to check the effects of the vaccines on the hematopoietic system and weight of mice after immunization. The Ethics Committee of Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi of Anambra State, Nigeria approved the protocol. **Setting:** The vaccines were collected from the cold-chain stores in Abia and Imo States of Nigeria and transported in vaccine carriers to the cold-chain facility in NAUTH within 3 hours of collection. **Participants:** The study was done with laboratory animals. A total of 160 mice were used. The vaccines were donated freely by the Ministries of Health of the States involved. **Results:** Mice body weight changes test shows that the mice all had increased body weight at days 3 and 7 post-immunization and none died during the 7 days post-immunization observation. The percentage weight gain of the mice compared to the control were 69, 70, 64, 63, 65 and 68 (%) for OPV, DPT, BCG, Measles, Yellow fever and Hepatitis B vaccines respectively collected from Imo State. The mice immunized with OPV, Pentavalent, BCG, Measles, Yellow fever and Hepatitis B vaccines collected from Abia State had 123, 114, 121, 116, 142 and 119 percentage weight gain respectively compared with the control. Leukocytosis-Promoting Toxicity test shows that none of the vaccines was able to induce proliferation of leukocytes up to ten folds. Leukopenic toxicity test shows that all the vaccines had an LTT value higher than 80 % LT value of the control (physiological Saline). **Conclusions:** The vaccine samples tested are safe and do not affect the hematopoietic system adversely. The storage conditions of the vaccines in the States' cold-chain stores had not compromised the safety of the vaccines. **Key words:** {Safety Evaluation, Vaccines, Routine Immunization, Imo and Abia, Nigeria} **Acknowledgement:** The Canadian Commonwealth Scholarship Program administered by the Canadian Bureau for International Education and African Doctoral Dissertation Research Fellowship award offered by the African Population and Health Research Center in partnership with the International Development Research Centre funded the research. States' Ministries of Health donated the vaccines.

## Cobden 1

12:40

### A Perspective from Fresh Minds

Session title ABSTRACT PRESENTATIONS

Chair Mr Matyas Jakab and Miss Sargam Vohra

#### Ref: 684 Oral

Ischaemic Time Intervals in Myocardial Infarction Patients from a Romanian Heart Institute

Presenting author: **Matyas Jakab**

University of Manchester, OA.03.29, Hulme Hall Oxford Place M14 5RR Manchester, United Kingdom.

Co-authors:

1. Background STEMI (ST-Segment Elevation Myocardial Infarction) is a medical emergency requiring urgent intervention as the loss of cardiac muscle is directly proportional to ischaemic time (time elapsed from the onset of symptoms to reperfusion). Moreover, ischaemic time determines treatment options in STEMI, and the gold standard of treatment is only used in the first 12 hours after the infarction. 2.

Purpose The aim of this study was to determine the breakdown of patients' ischaemic time in a Heart Institute in Cluj-Napoca, Romania, in order to identify the longest interval, as well as the one(s) which could be most easily shortened. The ultimate goal is to achieve an ischaemic time of under 12 hours for as many patients as possible, thus assuring access to reperfusion therapy. 3. Method The study cohort comprised 62 STEMI patients treated at the 'Niculai Stancioiu' Heart Institute in Cluj-Napoca, Romania, from 21.10.2009 until 21.12.2010. A questionnaire was used to collect data regarding ischemic time intervals, risk factors and unstable angina. The data was processed with Microsoft Excel 2003 and OpenOffice.org Calc. 4. Results The average ischaemic time was 9 hours and 12 minutes, which fits into the 12-hour time frame when medical intervention can be carried out. Of these 9 hours and 12 minutes, an average of 2 hours and 56 minutes passed from the onset of chest pain to calling the emergency services. Although the longest interval on average was the time from the patients' home to intervention (4 hours and 9 minutes), this was skewed by a number of patients arriving from distant parts of the country, as well as some patients being taken to several hospitals before intervention. The investigation of risk factors showed that 63% of patients were smokers, 69% had high blood pressure, while 27% of them suffered from diabetes and 44% had dyslipidaemia. Unstable angina, a predictor of myocardial infarction, was present in nearly half the patients a few days prior to their coronary event. 5. Conclusions

One of the most significant findings was the long time interval elapsed between the onset of STEMI and the call to an emergency service. This time, during which nothing is done to treat the coronary event, is particularly important because it represents the first hours of the infarction, when most deaths occur. It also expands the total ischaemic time, which is inversely proportional with the chances of survival. Patients should ideally call an ambulance immediately after having experienced chest pain for more than

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20 minutes. The population must therefore be informed about the seriousness and symptoms of a myocardial infarction.

### Ref: 685 Oral

Why Can't we Cure Type 2 Diabetes?

Presenting author: **Ms. Sargam Vohra**

University of Manchester, Stopford Building Faculty of Medical and Human Sciences The University of Manchester Oxford Road Manchester Stopford Building, Faculty of Medical and Human Sciences, the University of Manchester, Oxford Road, Manchester, M13 9PT, United Kingdom.

Co-authors:

Type 2 Diabetes is a chronic condition caused by inadequate insulin action resulting from insulin resistance or reduced insulin release from pancreatic  $\beta$ -cells. This leads to higher blood glucose levels than normal. Obesity can also lead to type 2 Diabetes. This report aims to assess the feasibility of pharmacological and non-pharmacological treatments, and whether Type 2 Diabetes can be cured. Results show that drugs like Metformin successfully decrease glucose concentrations along with triglyceride levels, but they are contraindicated in patients with liver or renal damage. Thiazolidinediones are effective in decreasing glycated haemoglobin and increasing HDL (High Density Lipoproteins) levels. However, they can cause hepatotoxicity, cardiac failure and circulatory problems. Insulin therapy is used to make up for relative insulin deficiency but it poses a risk of hypoglycaemia, which often makes it difficult to devise a regimen. Medical Nutritional Therapy includes strict control along with exercise. Thus management of type 2 Diabetes is achievable with a combination of regular monitoring, administration of drugs and lifestyle changes. However, the benefits are reversible upon discontinuation of therapy, and a permanent cure is yet to be found. Future possibilities include  $\beta$  cell transplantation, use of stem cells and usage of synthetic hormones.

**Ref: 692 Oral**

Maximizing the Anti-oxidant Content of Cooked Mustard Leaves (*Brassica juncea*)

Presenting author: **Ms. Sargam Vohra**

University of Manchester, Stopford Building Faculty of Medical and Human Sciences The University of Manchester Oxford Road Manchester Stopford Building, Faculty of Medical and Human Sciences, the University of Manchester, Oxford Road, Manchester, M13 9PT, United Kingdom.

Co-authors: Mr. Sean Johnson, UWCSEA(United World College of SouthEast Asia)

Author Request: Not for Publication

Ref: 729 Oral

Relevance and impact of genetic testing for colon cancer

Presenting author: **Djamila Mubashchira Rojoa**

University of Manchester, Flat 25 room F Linen House Ropemaker Court 500 Moss Lane East Manchester M14 4PL, Mauritius.

Co-authors:

**Aim:** Assessing the relevance and impact of genetic testing for colon cancer globally  
**Description:** For the past few decades, numerous studies were carried out to determine the causative link between colon cancer and mitogenic factors. In the UK, 5 in 100 people are affected, while the prevalence throughout the world is 5%, and the chances of having colon cancer increases as people get older. The results showed that aside from the sporadic nature of colon cancer, it was commonly seen in affected families hinting that colon cancer was a potentially inheritable disorder. The observed cases of familial clustering led to the belief that in addition to the environmental and lifestyle factors, genetic and epigenetic variations account for a fraction, 35%, of colon cancers. The responsible mutated genes were identified by the late twentieth century. These highly penetrant genes are responsible for three main types of inherited genetic syndromes, namely the familial adenomatous polyposis (FAP), the hereditary non-polyposis colorectal cancer (HNPCC) and the hyperplastic polyposis syndrome (HPS). Furthermore, most sporadic cancers occur at a later stage in life as opposed to inherited ones. Since the occurrence time-frame is not a trustworthy way of assessing the risk and diagnosing colon cancers, new technologies were developed for genetic testing. DNA testing relies largely on the hybridization property of the DNA strands. Polymerase chain reaction, Protein truncated test and Southern blotting are used for FAP and HNPCC. In the case of HNPCC, specific guidelines and criteria need to be met before proceeding to genetic testing. Both incidence and mortality related to colon cancer have been reduced by 60% since the advent of genetic screening. At present, the methods used for testing aim at hitting the right balance between the cost and effectiveness. However, despite the undeniable efficiency of genetic screening, disparities between different socioeconomic groups as well as geographic locations exist. The rates of screening in urban areas are higher and they differ substantially from the screening methods in rural areas. This disparity can be attributed to the cost, accessibility and socioeconomic status. The responsible genetic mutations and how they are tested for are discussed in further details in this PEP. **Conclusion:** Screening for colon cancer can be performed using sigmoidoscopy and has a long-term benefit for around 10 years. However, genetic screening can help prevent cancer from a younger age and thus spans the benefit over a longer time-frame. Genetic testing on the other hand has revolutionized the way colon cancers are diagnosed and will hopefully lead to a more adequate and precise treatment plan for each subtype of colon cancer. This will however not be possible unless the grounds are evened out between the different socioeconomic and geographically dissimilar groups.

## Cobden 1

14.00

### Health Promotion / Health Equity, Inequalities and Disparities

Improving access to health care in cities and the impact on individuals

Chair

Mrs Helen Gollins

#### Ref: 146 Oral

Improving access to sexual health services by increasing cultural sensitivity: a community engagement and partnership model.

Presenting author: **Helen Gollins**

Mersey Deanery, Trafford Council, United Kingdom.

Co-authors: Clare Cummings MSc, Research Consultant for the Centre for Local Economic Strategies, Sarah Doran, Greater Manchester Sexual Health Network, Atiha Chaudry, Chair of the Manchester BME Network

1. Aims Following the publication of the Termination of Pregnancy Health Equity Audit (HEA), NHS Manchester commissioned the Manchester BME (Black and Minority Ethnic) Network to undertake community engagement and consultation with women from BME communities. By exploring BME women's views, experiences and perceptions of contraception, sexual health services and termination of pregnancy services, this qualitative study aimed to improve access to sexual health services for BME women. 2. Design The HEA Termination of Pregnancy report (2007-2009) showed that amongst some BME communities the incidence of terminations of pregnancy was higher than expected. Recent termination data showed that for some groups of women it was significantly higher, particularly in certain Manchester wards. The Manchester BME Network, in partnership with the Centre for Local Economic Strategies, undertook a qualitative research study with women in these target wards to explore the reasons why termination rates were higher. For the community consultation, four member organisations of the Manchester BME Network were engaged: Wai Yin Chinese Women's Association; Manchester Women's Empowerment Group; Creative Hands; and My Communities UK. Two volunteers from each of these organisations were trained as community researchers to undertake the neighbourhood level consultation. In total, 60 women took part in the face-to-face interviewing process and 6 focus groups were held, one in each of the locations identified. 3. Results i. BME women's views and experiences of using contraception and using sexual health services Across all ethnic groups, contraceptive methods are considered easily accessible and nearly all women are registered with a GP. However, three barriers to using contraception were identified; language and communication, gender of sexual healthcare professionals and anonymity and confidentiality. ii. BME women's experiences and perceptions of

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termination of pregnancy services Women from all three ethnic groups expressed concern about the acceptability of having a termination; their main concerns were related to religious belief and the attitude

of their family and/or partner. Main reasons for having a termination were age, social stigma of a pregnancy that had occurred outside of marriage, attitudes of family and partner, and health. Termination services were described as being professional and women were well informed about the medical aspects of the procedure. Negative experiences of termination services mainly related to a lack of emotional guidance and aftercare, difficulty communicating with service providers and concerns over privacy. 4. Conclusions The results are being shared with both commissioners and providers of sexual health services across Greater Manchester. Using community engagement to understand the reasons for how and why BME women use sexual health services is an effective and evidence based approach to improving health and reducing inequalities for BME women.

**Ref: 640 Oral**

Positive Preventive Behaviors Of HIV Transmission Among Reproductive Women Living With HIV/AIDS In Yangon, Myanmar

Presenting author: **Dr. Khin Sandar Aye**

Mahidol University, Bangkok, Thailand. University of Medicine -1, Yangon, Myanmar., No.318, Thamine 11th Street, 13th Ward, Thamine, Mayangone Township, Yangon, Myanmar., Pakistan.

Co-authors: Kanithha Chamroonsawasdee

Author Request: Not for Publication

Ref: 658 Oral

Neighbourhood characteristics and wellbeing

Presenting author: **Asiyeh salehi**

School of Health and Medicine, Griffith University, Australia, School of Health and Medicine, Griffith University, Australia, Australia.

Co-authors: Neil Harris, Elisabeth Coyen, Bernadette Sebar, Mohsen Hassani

**Introduction and aims:** Interest in neighborhood conditions and their impact on individual and population health has grown enormously in recent decades. This study explored the relationship between a number of elements of neighborhood life and subjective well-being and lifestyle behaviors of young Iranian women.

**Methods:** Using a cluster convenience sampling technique, 391 young Iranian women participated in a cross sectional survey. A measurement adapted from the British General Household Social Capital scale was used to assess four main domains of neighborhood characteristics (satisfaction with living in the local area, the physical environment, socioeconomic neighborhood conditions and socioeconomic inequality). Satisfaction with Life Scale (SWL), WHO quality of life and the International Health and Behaviors survey were used to measure outcome variables. Data was analyzed using SPSS 20.

**Results:** Findings showed that participants (mean age: 27) were averagely satisfied with living in their local area ( $M = 10$ , score range: 2-15) including an average satisfaction with the physical environment such as traffic, industrial fumes and safety ( $M = 38.5$ , score range: 14-55). The mean score of socioeconomic neighborhood conditions was 36 (score range: 11-60) which was below average with greatest dissatisfaction related to employment opportunities, availability of social services and local amenities such as library, museum, swimming pool and educational institutions. Findings also showed very low mean score for satisfaction with specialized leisure facilities for young Iranian women ( $M: 1.8$ , score range: 1-5). With respect to the socioeconomic inequalities and causes of crime in Iran, highest agreement was related to poverty (83.9%), unemployment (82.8%) drug usage (76.8%), discrimination in society (68.2%), lack of discipline from parents (63.5%), breakdown of family (62.4%), alcohol consumption (60.1%) and low quality of police (59.9%). Interestingly, being employed vs. unemployed was associated with increased perception of inequality in society. All domains of neighborhood characteristics were significantly and positively associated with better QOL including physical, psychological, social, and environmental QOL ( $p$  value: 0.001) and also SWL ( $p$  value: 0.01). There was a negative correlation between access to leisure facilities for young women, smoking and alcohol consumption (0.05). Further, participants with higher levels of religiosity reported more access to leisure facilities and greater satisfaction with living in the local area was associated with higher income. There was a significant difference identified in perceptions of quality of local physical and socioeconomic environment between memberships of ethnic groups (High perception by Tork, Fars vs. low perception by Lor).

**Conclusion:** characteristics of neighborhoods or locations particularly resources and leisure facilities are linked to health outcomes of young Iranian women.

**Ref: 686 Oral**

Communication is a process rather than a time bound project that aims changing peoples' health behavior in a short period of time

Presenting author: **Yasmin Khan**

Bangladesh Center for Communication Programs (BCCP), House # 8, Road # 3, Block- A, Section- 11, Mirpur, Dhaka- 1216, Bangladesh.

Co-authors: Md. Motaherul Haque, Dr. Kapil Ahmed, Mohammad Shahjahan

Author Request: Not for Publication

### Ref: 757 Oral

(A Pilot study) The Socio-Economic Impact Of Cancer On Patients And Their Families In A Developing Country .

Presenting author: **Zeeshan Yousuf**

Liaquat University of Medical and Health Sciences, Jamshoro, B-21, 1794, Akal Bhounga Lane, Faujdari Road, Hyderabad, Sind, Pakistan., Pakistan.

Co-authors: Dr. M. Yousuf

**Introduction.** Cancer is preventable with existing modern screening methods. The pilot study will contribute to a better understanding of socio-economic problems faced by families of cancer patients in developing countries **Objectives.** To assess the socio-economic impact of Cancer borne by patients and their families in a developing country. **Methods.** A pilot study was carried out by conducting a survey of Cancer patients visited Nuclear Institute of Medicine and Radiotherapy Jamshoro (NIMRA) in 2010. A pre-tested questionnaire was used and convenient sampling method was adopted to collect the data. Impact of cancer disease in 5 domains of patient's life ; Employment, Income, Household, Budget, Access to Healthcare and family support was observed. **Results.** The data was collected from 60 diagnosed patients of Cancer. The mean age of patients were 43.5 years, among them, males were 48.3% and females 51.7%. About 25% of cases were suffering from breast cancer, 20% from mouth cancer and 10% from abdominal cancer. The cost of treatment was ranging from 100 US\$ to 2500 US\$. Mean daily cost of treatment was 15US\$ . 85% were compelled to borrow the money for treatment from son, father and husband. 99% patients desired to fight against disease till death. Only 20% patients were employed. About 53.3% patients shared that their family is disturbed due to disease. **Conclusion.** The socio-economic impact of cancer should be considered, as it may have negative impact on treatment compliance. Policies should be developed to have effective social support system for Cancer patients.

## Ref: 543 Oral

Does the level of wealth inequality within an area influence the prevalence of depression amongst older people?

Presenting author: **Alan Marshall**

University of Manchester, CCSR, Humanities Bridgeford Street Building, Oxford Road, University of Manchester, Manchester. M13 9PL, United Kingdom.

Co-authors: Stephen Jivraj, James Nazroo, Gindo Tampubolon, Bram Vanhoutte

This paper considers whether the extent of inequality in house prices within neighbourhoods of England (middle super outputs areas; average population, 7,200) is associated with depressive symptoms in the older population (aged 50+) using the English Longitudinal Study of Ageing. We consider two competing hypotheses: first, the wealth inequality hypothesis which proposes that neighbourhood inequality is harmful to health (and other social outcomes) partly as a result of harmful social comparison and, second, the mixed neighbourhood hypothesis which suggests that socially mixed neighbourhoods are beneficial for social and health outcomes, particularly amongst the poorest individuals who enjoy greater social opportunities and services within economically mixed areas than in areas composed predominantly of poorer people. Multilevel models are used to control for both individual and area determinants of depression and test for independent effects of area inequality on depression. The multilevel analysis reveals a significant, but small, association between neighbourhood inequality and depression with lower levels of depression amongst older people in neighbourhoods with greater house price inequality after controlling for individual socio-economic correlates of depression (age, gender, economic activity, limiting long term illness, wealth, ethnicity, living arrangements), unhealthy lifestyle choices (drinking and smoking) and area correlates of depression (deprivation and area wealth). We also find evidence for higher levels of depression in neighbourhoods with cheaper housing and greater deprivation. Our findings suggest that the wealth inequality hypothesis, developed to explain inequalities in health and other social outcomes across societies, is not relevant to depression at neighbourhood level. Our results are in line with research that suggests there are social benefits associated with economically mixed communities, particularly for the poorest individuals.

## Cobden 2

12:40

### Health Promotion / Health Equity, Inequalities and Disparities

Session title	ABSTRACT PRESENTATIONS
Chair	Mr Zelalem Adugna

#### Ref: 167 Oral

Determinants of maternal health service utilization in urban Ethiopia

Presenting author: **Zelalem Adugna**

John Snow, Inc., Zelalem Adugna Geletu Tele: +251 911 921206 Addis Ababa, Ethiopia, Ethiopia.

Co-authors: Marc Cunningham; Sophia Magalona

Background: Antenatal care (ANC) and the presence of a skilled birth attendant (SBA) during delivery have been demonstrated to improve maternal and perinatal health outcomes. In urban areas of Ethiopia, which have better service coverage and use than rural areas, only 50% of pregnant women received the recommended four or more ANC visits; and only 51% pregnant women had an SBA present at delivery.

Objectives: To guide policy makers and public health managers in developing targeted maternal health program improvements, we examined the socio-demographic factors affecting maternal health service utilization (ANC and SBA) in urban Ethiopia to identify inequities in service use. Methods: Using descriptive and bivariate analysis methods in SPSS V.19, we investigated the associations between women's use of maternal health services (ANC and SBA) and their socio-demographic determinants including household wealth, maternal age, and maternal educational attainment using data from the 2011 Ethiopian Demographic and Health Survey (2011 EDHS). With our focus on disparities in the urban environment, we subset our analysis to urban women surveyed ( $n = 1496$ ). Results: Wealth, maternal age and education independently affected ANC service use. Women in the top wealth quintile were more likely ( $OR=6.0, P<0.001$ ) than those in the poorest quintile to attend at least one ANC visit. Younger women (age 20 years or less) were more likely to receive the recommended four and more ANC visits compared to women who are more than 35 years old ( $OR =3.0, p<0.001$ ). Educated women were more likely to attend ANC at least once ( $OR=4.3, p<0.001$ ) than uneducated women. Ninety-three percent of those who attended secondary education had at least one visit compared with only 59% of those with no formal education. Similar patterns were seen for skilled birth attendance. Household wealth predicted presence of SBA during delivery with the top three wealthiest quintile more likely to delivery with SBA than the lowest two wealth quintiles ( $OR=7.2, p<0.001$ ). Nearly 19% of the poorest quintile of urban mothers had delivered with SBA compared to 87.2% of the wealthiest quintile. Younger women (age 30

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years or less) were likely to delivery in the presence of SBA than older women aged 30 years or older (OR=1.44, P<.001). Educated women were more likely (OR= 4.0, P<0.001) to have an SBA at delivery than

those not educated. Majority of births from women with secondary education were attended by SBA (84%) compared with few births (29%) from women lacking education. Conclusion: Inequalities in wealth, education and age are shown to affect maternal health service utilization in urban Ethiopia. Targeted programs should focus on the poor and less educated segment of urban population to ensure improved maternal and child health outcomes.

## Ref: 45 Oral

Migration, poverty and access to the healthcare: a study on people's access and health systems responsiveness in Hyderabad city, Andhra Pradesh. (ICMR - Multi-centric study)

Presenting author: **Dr. JJ Babu Geddam**

National Institute of Nutrition (ICMR), Deputy Director, NIN, Tarnaka, Hyderabad, Andhra Pradesh, India, India.

Co-authors: Dr.K.V.Radhakrishna, Dr.KSJ.Kiranmayi, Dr. Raghunath Rao, Dr. K Bala Krishna and Dr. B.V Babu

**Aim:** The aim of the present study was to develop and test a supportive strategy of healthcare, which would achieve the desired high level of access and delivery of health care services to urban non notified slum poor migrants. **Design:** The study adapted triangulation research methods to capture existing social realities of health care delivery in urban non notified slums. Survey was employed and a total of 4505 households from 31 non-notified slums were covered using snow balling technique. Grounded theory approach was applied using focus groups and in-depth interviews to identify the barriers influencing utilization of government healthcare facilities. **Setting:** Hyderabad is one of the most populous and fastest growing mega cities in India and is the capital city of Andhra Pradesh. It hosts a significant number of rural/urban slum migrants. Currently there is no available data about their utilization of public healthcare services. **Participants:** At the time of the study, migrants living in non notified urban slums/clusters/ for a period of 30 days to 10 years participated in the survey. While, key Informants such as women with children, medical officers, community block development officers, health workers, NGOs participated for qualitative aspect of the study. **Data analysis:** Descriptive and content analysis were carried using SPSS and ATLAS software **Results:** Merely, 13% of the urban slum migrants utilized government healthcare services despite availability of free treatment and various health schemes. Only 9% preferred government healthcare facility as a source of medical care in case of general illness. Details pertaining to antenatal care services revealed that 65% used government health facilities. Overall, 43% had antenatal checkups in 1st trimester, 52% during 2nd and barely 4% in the 3rd trimester. About 90% reported that public health workers never visited house holds to perform antenatal and post natal checkups. The coverage of immunization among children aged under 1 year, gradually declined from 99% at birth to 67% at 3 ½ months. Only 46% received measles and 44.5% had vitamin A. The results of survey and content analysis identified, cost distance, lack of awareness, mistrust about the staff, inadequate staff & logistics, long waiting hours and absence of public transportation and knowledge about schemes as obstacles for optimum utilization of government healthcare among urban slum migrants. **Conclusions:** As urban slum migrants are illiterate and more vulnerable in utilizing government healthcare facilities, the antenatal, post natal and immunization coverage is not up to the desired level. It is clear that this community needs a supportive strategy to strengthen the existing public healthcare system.

## Ref: 170 Oral

Functional limitations, depression, and cash assistance are associated with food insecurity among older urban adults in Mexico City

Presenting author: **Mireya Vilar-Compte**

Universidad Iberoamericana, Prolongación Paseo de la Reforma 880, Lomas de Santa Fe, 01219, Mexico City, Mexico.

Co-authors: Oscar Martínez-Martínez; Dania Orta-Alemán; Rafael Pérez-Escamilla

The purpose of this study was to examine factors associated with food insecurity among urban older adults in Mexico City. This cross-sectional study collected data among older adults attending 189 community centers in a low-income area (i.e. delegación) of Mexico City between May and September 2013. Community centers were identified through the local government, as well as through the Internet. In each community center all older adults (65 years and over), and residing within the delegación where the community center was located were invited to participate (n=346). Community centers were chosen as recruitment sites since it was expected that older adults attending them would have enough functional abilities to answer the questionnaire. Food insecurity was assessed with the 15-items Latin-American and Caribbean Food Security Scale, previously tested and validated in the target community. Through a multinomial logistic regression, the study assessed how functional impairments, health and mental health status, receiving cash-assistance programs for older adults, socio-demographic characteristics, social isolation, and elements related to the build-in food environment, were associated with food insecurity among older adults. Functional impairments were significantly ( $p<0.05$ ) associated with a higher risk of food insecurity among older adults; this association was significant when comparing any level of food insecure with food secure older adults (mild food insecure OR=1.26, moderate food insecure OR=1.71, severe food insecure OR=1.53). Significant and stronger associations were found for depressive symptoms (mild food insecure OR=1.87, moderate food insecure OR=3.92, severe food insecure OR=6.93). When comparing food secure, receiving cash-assistance programs targeted for older adults significantly reduced the risk of severe food insecurity (OR=0.25). Food insecurity in urban older adults is associated with functional limitations and depression, suggesting that food insecurity is linked to altered food use and psychosocial phenomenon that go beyond food affordability and availability limitations. The study also suggests that targeted cash transfers programs protect older adults against severe food insecurity.

## Ref: 220 Oral

Health and health care use in unemployed population of the Republic of Croatia

Presenting author: **Lovorka Bilajac**

Medical Faculty University of Rijeka, Department of social medicine and epidemiology, Brace Branchetta 20, 51000 Rijeka, Croatia.

Co-authors: Tomislav Rukavina, Vanja Vasiljev Marchesi, Miroslav Mastilica, Vanesa Benkovic, Ranko Stevanovic

**Aim:** Quality, access and efficiency of health care services are growing concerns in Croatia, as well as in the rest of the world. The growing question to health care providers worldwide is how can we achieve better health care accessible to all, without threatening the sustainability of systems and services? **Present economic crisis** has resulted in an increasing number of unemployed people. Most of them are middle aged, and capable to work. Because of their financial difficulties, their concerns about health are minimized with consequences on health status. The aim of the present study is to point out the current situation and difficulties with health care use of unemployed population according to their health status that could result with more extensive problems in the future. **Design:** The study was performed using the questionnaires that include variables regarding the health determinants, disabilities, life style, various elements of equity and fairness in the use of health care, personal characteristics, social cohesion elements and socio-economic determinants. **Settings:** Data were collected by structural questionnaires completed during interviews in subjects' home by patronage nurses. **Participants:** The research was conducted on a 1043 unemployed respondents of both genders (633 female and 401 male), that belong to working capable population. **Results:** Over 50% of respondents stated that their health conditions are a limiting factor in their daily schedule and activities. A great proportion of participants reported high blood pressure, high cholesterol and high glucose level as possible health risk factors. Beside that they reported great number of other medical conditions. Further, a great proportion of respondents declare rare use of preventive medical examinations. Over 40% of them have had one or no visit to the doctor during the past year, 57.7% of respondents declared that have never visited the dentist, and a Pap test was done by only 29.4% of women. The respondents declared a substantial barrier for healthcare use. The most important reasons of unavailability are financial (26.7%) and the distance (14.7%), while most often they cannot get appropriate drug or a specialist examination. **Conclusion:** Health is a condition that is influenced by numerous factors and one of the most important factors is using of health care as well. The use of health care, especially preventive physical examination is influential on early symptoms detection and can provide a prompt treatment that can prevent more serious health symptoms and consequently can provide health and a save the money to the health care system. Present disparities point out the burden of health system in the future. In order to ensure health equities in the future it is necessary to focus on health promotion and preventive measures in this particularly vulnerable population in order to minimized diseases as well as costs for health care system.

## Cobden 2

14:00

### Urban Risk and Humanitarian Response: Stress and the City

Session title Stress in the City I: Emergency and Rescue

Chair Geoff Hayes

#### Ref: 461 Oral

Consent preferences, public awareness and engagement around Electronic Health Records in the UK

Presenting author: **Chrysanthi Papoutsi**

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Co-authors: Fiona Riordan, Ruth Lewis, Julie Reed, Cicely Marston, Azeem Majeed, Derek Bell

**Background:** The development of Electronic Health Records (EHRs) forms an integral part of current health technology policy in the UK. Although previous work has examined public attitudes and awareness around data sharing, this has primarily focused on integrated EHRs for health research, rather than their simultaneous use for healthcare provision and secondary purposes. In addition, little is known about patients' views on existing information materials about EHRs. **Aim:** This study investigated consent preferences and public awareness around integrated records and explored patient perceptions of existing information materials on EHRs. **Design:** The project followed a multiple methods study design. A large-scale cross-sectional questionnaire survey recruited 5331 participants from 16 primary and secondary care clinics in West London (UK) using stratified cluster random sampling (August-September 2011). This was followed by 22 focus groups and interviews with 116 patients and members of the public, and 3 workshops to evaluate information materials (October-June 2013). **Results:** The majority of respondents (91%) expected to be asked for explicit consent if their identifiable records were accessed for the purposes of healthcare provision, research and planning/policy. Half of the sample (51%) expected to be asked for explicit consent before non-identifiable record access. Over a third of survey participants (41%) had not heard about EHRs in the past. Respondents who belonged to ethnic groups other than White British and individuals less confident in their computer skills were more likely to opt for the explicit consent model and less likely to have heard about EHRs. Those unaware of EHRs were less likely to report being willing to share their information under the implicit consent model. Discussions with patients confirmed widespread unfamiliarity with current data sharing practices in the NHS. In the evaluation of existing information materials on EHRs people often felt that: 1. Information materials provided generic descriptions emphasising the positive side of EHRs in abstract, while neglecting to mention potential downsides or to be more transparent about specific privacy and security issues; 2. They often used

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technical and inaccessible language (e.g. words such as anonymisation or unnecessary technical details), while most were only available in English; 3. Sources easier to understand were just available online, thus

being accessible to specific groups only. Conclusions: This study has identified disparities between socio-demographic groups in terms of their willingness to share personal data, while showing that information campaigns on EHRs do not adequately reach significant parts of the population. More effective information materials can be developed by tailoring messages to better target specific groups. This will ensure better balance in awareness as data sharing through EHRs becomes more widespread.

## Ref: 491 Oral

The Challenges Of Primary Health Care In The Brazilian Urban Centre: Quality Evaluation By Hospitalized Patients For Ambulatory Care Sensitive Conditions

Presenting author: **Francisco dos Santos de Sá**

Universidade Federal de São João Del Rei., Avenida Sebastião Gonçalves Coelho, 400. Sala 110A. Bairro Chanadour. Divinópolis. Estado de Minas Gerais, Brazil.

Co-authors: Cláudia di Lorenzo Oliveira, Hygor Kleber Silva Cabral, Clareci Silva Cardoso

**OBJECTIVE:** To evaluate the performance of the units of Primary Health Care (PHC) in the perspective of patients who need hospitalizations for ambulatory care sensitive conditions (HACSC) in a regional referral health county in the state of Minas Gerais, Brazil. **METHOD:** This was a cross-sectional study, conducted with all patients hospitalized for HACSC in public health services in the municipality of Divinópolis in the period between July and October 2011. All hospitalizations were registered, and patients in the town of Divinópolis were interviewed to assess the PHC. It was raised socioeconomic, demographic and clinical information. The PHC was evaluated using the theoretical model proposed by Barbara Starfield through the instrument Primary Care Assessment Tool - PCAT (scores 0-5), validated to Brazil. Descriptive analyses were conducted, calculated the Index of Primary Care (IPC) according to the health model used by the patient, if the Health Basic Unit (HBU) or Health Family Strategy (HFS). Comparisons between the IPC (index of primary care) for the two models of care were performed using the Mann-Whitney or chi-square test with significance level of 0,05. **RESULTS:** We identified 2,775 hospitalizations, with a prevalence of 36,6 % of ACSC having as the main causes pneumonia (13,7%), heart failure (12,4%), arterial hypertension (12,4%) and diabetes mellitus (10,9%). To evaluate the Health family strategy (HFS) in the municipality of Divinópolis 314 patients were interviewed, 83 (26,4%) assisted by HFS and 231 (73,6 %) by traditional basic health unit (HBU). There was no statistically significant difference between the general PHC for the two models of care: HFS=IPC 3,33 vs. HBU=IPC 3,23. The dimension with small IPC was assessed with no statistically significant difference between the models: HFS=IPC 2,07 vs. HBU=IPC 2,17 ( $P=0,17$ ). The HFS was better assessed in relation to the dimensions of contract, family focus and community orientation with statistically significant differences ( $p < 0,05$ ). **CONCLUSION:** The most frequently identified HACSCs suggest inefficiency diagnosis and timely treatment for IPC in municipalities with low coverage of HFS (27%) and this indicator is considered an important marker of quality of service in the IPC. The major urban centres in Brazil have social inequality and poor access to health services. In this sense, the PHC has a fundamental role which is to expand the supply of basic health services, but also to ensure quality and the health care solving problem. Although with low coverage in the county, the care model FHS showed greater skill in link building and provision of care focused family and community characteristics important for the ongoing care and identification of social determinants of health. Generally, HBU showed deficiency in promoting access to services, since users reported difficulty in obtaining medical care and lack of flexible hours to care for the population in the two models.

**Ref: 296 Oral**

Measuring Happiness In Community Settings: Experience From Sri Lanka

Presenting author: **G. N. Duminda Guruge**

Department of Public Health, Faculty of Medicine, University of Kelaniya, PO Box 06, Thalagolla Road, Ragama, Sri Lanka, Sri Lanka.

Co-authors: Kalana Peris, Manuja N. Perera

Background Sri Lanka still has a high prevalence of suicides and other social manifestations of poor mental well-being. 'Happiness Calendar' is a tool introduced in a community based child health project in Sri Lanka with the aim of improving mental wellbeing of children and adult care-givers. The objective of this study was to explore the usefulness of the 'Happiness Calendar' in empowering communities to identify determinants of their mental wellbeing. Methods A qualitative study was conducted with nine focus group discussions and 16 in-depth interviews. Participants were recruited by purposive sampling until information saturation point is reached. Data were analyzed manually by two independent reviewers and emerged themes were compared to assure validity. Analysis was based on grounded theory and constant comparative method was used. Results At household level, happiness calendars led to identifying factors affecting happiness such as substance use, poor money and time management. It helped in filling the communication gaps by stimulating family level discussions and improved relationships between family members. It contributed to the process of promoting child health by improving care for the pregnant mothers and improving bonding between parents and children. It led to improved opportunities for psycho-social development in children. In school settings it enabled adolescents to identify opportunities to divert their energy into positive actions. Happiness calendars in occupational settings were motivating tools for improvement of quality of services. When used at community level, it helped to identify community level determinants of health and happiness. It also strengthened the social networks by improving bonding between individuals in the community. Conclusion 'Happiness Calendar' is a useful tool in health promotion processes to empower individuals and communities to identify determinants of mental well-being.

**Ref: 298 Oral**

Catalyzing collective community actions to improve early childhood development: experiences from Sri Lanka

Presenting author: **G. N. Duminda Guruge**

Department of Public Health, Faculty of Medicine, University of Kelaniya, PO Box 06, Thalagolla Road, Ragama, Sri Lanka, Sri Lanka.

Co-authors: Kalana Peris, Manuja N. Perera

**Background** A community-based health promotion programme was piloted in Sri Lanka aiming to improve growth and development of children below 5 years, from 2010 to 2012. It was a joint project implemented by Foundation for Health Promotion, Ministry of Health, Plan Sri Lanka and Rajarata University of Sri Lanka. The project covered over a 100 community settings with an approximate population of 100,000 in 2000 families. **Methodology** The community-based health promotion model was facilitated by a team comprised of grass root level health care workers and Health Promotion facilitators from foundation of health promotion. Small group discussions with mothers of children under 5 years of age initiated community owned collective community actions sustained by self monitoring mechanisms that proved their effectiveness. Communities adopted a range of collective practices that would provide children with more early intellectual stimuli such as Happy diaries, baby corners and Community Play Houses. The processes were scaled up in the communities by the shared enthusiasm and knowledge of the community members, facilitated by the health promotion facilitators. **Results** Findings from the qualitative methods revealed that 'feeding the five senses' concept introduced by the project made the parents understand the concept of providing early intellectual stimulation better and motivated them to transfer it to practice. At the end of the study period, 1915 families were practicing measures adopted during the project to provide children with a range of stimuli. Involvement of fathers improved significantly along with the average time parent spent with the children. Child nutrition status improved with significant reduction in under five under nutrition indicators. **Conclusions** Collective community action, generated through Community-based Health Promotion approach, is effective in improving parent's motivation and enthusiasm to provide children with broad range of early stimuli.

## Cobden 3

11:00

### Urban Risk and Humanitarian Response

Session title Plenary

Chair Dr Alfredo Stein

Understanding the role of the fire and rescue service and how it plays an important role in responding to disasters in an urban environment.

Presenting author: **Steve Jordan Greater Manchester Fire and Rescue Services**

Greater Manchester Fire and Rescue Services

It is taken for granted by many that a nation's fire and rescue service provides an effective emergency response. However, for many countries and cities there is very little support or provision granted for such a key service. At a time of a recognised increase in the vulnerabilities and risks within urban environments and the need to improve preparedness, prevention and response to disasters, the fire and rescue service is often overlooked. The UK Fire and Rescue Service is one of the largest supporters and donors of fire and rescue equipment and training in the world for many struggling fire and rescue services. As well as the development of technical skills, firefighters can further enhance their role as community advocates for risk reduction education within communities. By recognising the positive impact a fire and rescue service can have, we can better understand its necessity and answer the question, "what would we do without a fire and rescue service?".

## Cobden 3

14:00

### Urban Risk and Humanitarian Response: Ambivalence of urban humanitarianism

Session title	Ambivalence of urban humanitarianism I: Refugee settlements as places of permanence and transition
Chair	Dr Tanja Muller

Prolonged emergencies and the development of humanitarian epistemic communities, the Thai border camps, 1976-1996

Presenting author: **Bertand Taithe**

HCRI, University of Manchester

Background A community-based health promotion programme was piloted in Sri Lanka aiming to improve growth and development of children below 5 years, from 2010 to 2012. It was a joint project implemented by Foundation for Health Promotion, Ministry of Health, Plan Sri Lanka and Rajarata University of Sri Lanka. The project covered over a 100 community settings with an approximate population of 100,000 in 2000 families. Methodology The community-based health promotion model was facilitated by a team comprised of grass root level health care workers and Health Promotion facilitators from foundation of health promotion. Small group discussions with mothers of children under 5 years of age initiated community owned collective community actions sustained by self monitoring mechanisms that proved their effectiveness. Communities adopted a range of collective practices that would provide children with more early intellectual stimuli such as Happy diaries, baby corners and Community Play Houses. The processes were scaled up in the communities by the shared enthusiasm and knowledge of the community members, facilitated by the health promotion facilitators. Results Findings from the qualitative methods revealed that 'feeding the five senses' concept introduced by the project made the parents understand the concept of providing early intellectual stimulation better and motivated them to transfer it to practice. At the end of the study period, 1915 families were practicing measures adopted during the project to provide children with a range of stimuli. Involvement of fathers improved significantly along with the average time parent spent with the children. Child nutrition status improved with significant reduction in under five under nutrition indicators. Conclusions Collective community action, generated through Community-based Health Promotion approach, is effective in improving parent's motivation and enthusiasm to provide children with broad range of early stimuli.

Between longing and belonging: the dynamics of place-making of IDPs in Colombia

Presenting author: **Mateja Celestina**

HCRI, University of Manchester

The great majority, about three quarters of Colombian internally displaced persons (IDPs) resettle in urban areas. Therefore research usually focuses on the difficulties they encounter in getting around their lives in a new environment. Meanwhile, not much is known about those who resettle in rural areas and yet they too experience challenges in place-making processes. Based on 10-months of primary data collection using ethnographic methods, this paper looks at some of the elements that inhibit or facilitate people's engagements with the construction of a new 'home' in rural settings. The paper addresses the question of why the process is more successful for some and less for others. Some factors, like nostalgic memories, sediments of recycled fear, people's personal interpretations of displacement and the meaning attached to it, and inter-personal relationships can be present in both rural and urban environment. Others, however, are more specific to one's present but also past surroundings. Overall, the paper argues that the current resettlement policy does not capture the complexity of the process, failing to find a 'durable solution' to displacement.

Precarious lives in multiple margins: an asylum seekers' place in 2013 Thessaloniki

Presenting author: **Despina Syrri**

Symβiosis, Thessaloniki.

Drawing from work on situated accounts of urban poverty and marginality, this paper attempts to consider the instantiation of life at the margins by examining the case of the Refugee Reception Centre in Thessaloniki, the only temporary structure hosting refugee families in the city, an informal settlement since the crisis in Greece began. I will look into the ambivalence of urban humanitarianism, the role the urban plays in the daily processes of marginalisation, into how agencies' affective atmospheres, resilient materialities, prosaic technologies, and the power of care, affect the lives of asylum seekers, as well as into what kind of policy insights can derive from taking the city back into our understanding of the above processes. The aim is to investigate urban marginality not as a static condition, but to render it in its on-going nuanced development, as a place of permanence and transitions, confronting the normative categorisations that mostly inform public policy making.