

P1-208 EPIDEMIOLOGY INTO ACTION: SURVEILLANCE OF DEATHS AND MONITORING QUALITY OF PERINATAL HEALTHCARE TO REDUCE MATERNAL AND INFANT MORTALITY IN BELO HORIZONTE CITY, BRAZIL

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S Lansky,* R D Perillo, G Maciel, S Castro, N G Madeira. *Belo Horizonte Health Department, Belo Horizonte, Minas Gerais, Brazil*

Since 1999 a perinatal health commission was set in Belo Horizonte to establish a policy framework to reduce maternal and infant mortality. A comprehensive audit of maternity care was made and in 2000 an integrated system was organised, from prenatal to birth care and the continuum of care after maternity discharge. Nine hospitals providing inadequate care were closed, in a total of 16 maternity-hospitals public services. Surveillance of maternal deaths (since 1997) and infant and perinatal (since 2002) process audit feedback the staff in order to avoid other preventable deaths. Hospital and health clinics charts are evaluated and family interviews provide information about the circumstances of maternal and infant deaths. Since 2006 an observational system to monitor quality of care process was established within the maternities: auditors evaluate hospital charts and interview 5% of all women in labour and women after birth. Important changes were registered: in 1999, only 20% of women in labour were monitored with partography, whereas in 2006, 80% had an adequate or complete partograph. Infant mortality was reduced by 65% and maternal mortality by 25% between 1994 and 2009. There was a 3.1 reduction in the risk of death of intrapartum causes, one of the most prevalent and preventable causes of infant deaths: in 1999, 9.9 perinatal deaths/1000 births (birthweight ≥ 1500 g) occurred, of which 4.2/1000 births were from intrapartum causes, whereas in 2007 4.2 perinatal deaths/1000 births occurred, of which 1.3/1000 births were from intrapartum causes.

P1-209 TEACHING FACTORS ASSOCIATED TO VOICE DISORDERS: A CASE-CONTROL STUDY

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^{1,2}S Giannini, ¹M do R Latorre,* ²L Ferreira. ¹*School of Public Health USP, São Paulo, Brazil;* ²*Pontifical Catholic University of São Paulo, São Paulo, Brazil*

Introduction and Aims of the Study Teachers constitute professional category with high occurrence of voice disorders due to this occupation's intense vocal demand and to unfavourable work environments. To identify job's factors associated to voice disorders in teachers of the public school of the city of São Paulo.

Methods This is matched case-control study. The case group was teachers with vocal quality deviations and vocal fold lesion or altered larynx. The control group was selected at the same schools in which the case group individuals worked. Both groups answered the questionnaires: Conditions of Vocal Production-Teacher(CVP-T), Vocal Handicap Index (VHI), Job Stress Scale (JSS) and Work Ability Index (WAI). The analysis was done using qui-squared association test and multiple regression models.

Results 78.8% of the control group are concentrated in lower levels of demand of job stress, while 69.3% of the case group are located at higher levels ($p=0.019$). Regarding work control, 63.1% of the control group had higher levels of control, while 73.1% of the case group are in the lower categories ($p=0.034$). There is a significant association between low work ability and voice disorder ($p<0.001$). This association is maintained in the multivariate analysis, where low ($OR=9.5$, $p=0.001$) and moderate ($OR=6.7$, $p<0.001$) capacity for work were also associated with voice disorder.

Conclusions Low and moderate ability to work show high correlation with the presence of voice disorder. The presence of voice disorder may jeopardise their careers because these professionals depend essentially on their voices to teach.

P1-210 INCOME INEQUALITY AND CAUSE-SPECIFIC MORTALITY DURING ECONOMIC DEVELOPMENT

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E W Lau, K Y Tin, G M Leung, M C Schooling.* *The University of Hong Kong, Hong Kong, China*

Introduction Life expectancy is strongly related to national income, whether there is an additional contribution of income inequality is unclear. We examined the association of income inequality with mortality over historic time in a non-western population which has experienced uniquely rapid economic development.

Methods We used negative binomial regression to examine the association of neighbourhood level Gini, adjusted for age, sex and income, with all-cause and cause specific mortality rates in Hong Kong for an earlier (1976, 1981 and 1986) and later (1991, 1995, 2001 and 2006) period.

Results Neighbourhood Gini was not associated with all-cause mortality in the earlier period (incident rate ratio (IRR) 0.96, 95% CI 0.93 to 1.00 per 0.1 change in Gini) but was in the later period (IRR 1.25, 95% CI 1.20 to 1.29), adjusted for age, sex and absolute income, despite a consistent association with non-medical mortality in both periods (IRR 1.11, 95% CI 1.06 to 1.17 and 1.29, 1.21 to 1.37). In the later period Gini was associated with mortality from cardiovascular diseases, including ischaemic heart disease (IHD), and respiratory diseases, but not with mortality from cancer.

Conclusion The impact of income inequality on cardio-respiratory mortality emerged over a period of economic development. Whether there is any additional benefit beyond those provided by material conditions from re-distributing income is unclear and may be confined to some specific causes of death, such as non-medical mortality and IHD, for which specific interventions could be designed.

P1-211 NEIGHBOURHOOD SOCIODEMOGRAPHIC, PHYSICAL, SERVICE-RELATED, AND SOCIAL-INTERACTIONAL CHARACTERISTICS AND BMI OR WAIST CIRCUMFERENCE IN THE RECORD STUDY: EVALUATION OF THE SEPARABILITY OF ASSOCIATIONS WITH A NEIGHBOURHOOD CHARACTERISTIC-MATCHING TECHNIQUE

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^{1,2}C Leal,* ³K Bean, ¹B Chaix. ¹*Inserm U707, Paris, France;* ²*EHESP, Paris, France;* ³*IPC Center, Paris, France*

Introduction Previous studies on the environment and obesity have estimated mutually adjusted effects of different environment factors that are strongly correlated with each other, without carefully assessing whether it is possible to disentangle these effects.

Methods We investigated whether correlated neighbourhood characteristics related to the sociodemographic, physical, service-related, and social-interactional environments measured within ego-centered areas were associated with BMI and waist circumference, and assessed whether or not these associations could be disentangled using an original neighbourhood characteristic-matching technique (analysis of each environmental effect within pairs of individuals similarly exposed to another environmental variable). We conducted cross-sectional analyses of 7230 adults from the RECORD Cohort Study (Paris region, France).

Results After adjustment for individual/neighbourhood socioeconomic variables, both outcomes were negatively associated with characteristics of the physical/service environments reflecting higher densities (eg, built surface area, street network connectivity, and densities of fruit/vegetables selling shops, fast-food restaurants, and healthcare resources). Multiple adjustment models were unable to disentangle the effects of these correlated densities. Analyses by pairs of participants similarly exposed to another environmental variable only identified a few associations, primarily with the density of fruit/vegetables selling shops.

Conclusion Overall, beyond influences of the socioeconomic environment, certain characteristics of the physical/service environments may be associated with weight status, but it may be difficult to disentangle the effects of various environmental dimensions because of the strong correlation between the variables (even if they imply different causal mechanisms and interventions).

P1-212 HEALTH DISPARITIES AND SURVIVAL IN BRAZILIAN OLDER ADULTS

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M L Lebrão,* J L F Santos, Y Duarte. *University of Sao Paulo, Sao Paulo, Brazil*

Introduction Population ageing is not restricted to developed countries. In fact, the percentage of older adults is increasing more rapidly today in the developing world than in developed nations. These trends have important implications for understanding the mechanisms of population ageing. It will be impossible to understand fully the global economic and political issues without an appreciation of the ageing of the world population. This study analysed health disparities associated with survival in older adult in a 6 year follow-up in Sao Paulo, Brazil.

Methods Data comes from a longitudinal survey-SABE Study (Health, Well-being and Ageing) that began in 2000 with a sample (n=2.143) of older adults (≥60 years) living in São Paulo/Brazil. The 2nd wave (2006) re-interviewed 1.115 elders. Multi variable analysis was performed adjusted logistic regression with robust estimation. Kaplan-Meier Survival Analysis was used to analyse death at 6 years.

Results Data show an annualised mortality rate of 55.2 per 1000 for males and 34.0 for females. The demographic variables associated with survival, besides age and gender, were greater education (p<0.000), higher income (p<0.00) and from an urban area in women (p=0.015). The health related variables associated with survival were self-reported better health (p<0.000-women and p=0.016-men), no self-reported disease (p<0.000), depression (p=0.035 for women) and no disability (p<0.000). In the Kaplan-Meier, men with excellent health are close to the women with regular health which is self-reported. Absence of disability makes the male curve higher than the female.

Conclusions Public policies should take into account the specific needs of the elderly population to facilitate access to healthcare services and reduce inequalities.

P1-213 2009 PANDEMIC INFLUENZA A (H1N1) IN MALAYSIA

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¹Y L Lee,* ²H Ismail, ³K K Tan, ¹P Subramaniam, ¹T Adnan, ¹J Haniff. ¹*Clinical Research Center, Ministry of Health Malaysia, Kuala Lumpur, Malaysia;* ²*Hospital Kuala Lumpur, Kuala Lumpur, Malaysia;* ³*Hospital Tuanku Ja'afar, Seremban, Malaysia*

Background There is lack of children disease pattern data on children with 2009 pandemic influenza A(H1N1) in the tropics.

Methods We studied demographics, clinical features, and outcome of Malaysia hospitalised children aged 12 years and below with influenza A (H1N1) from 18th June 2009 to 1st March 2010. Real time web electronic case report form was used to collect data. We performed descriptive analysis and ORs with 95% CI were calculated using logistic regression of binary outcome.

Results 1362 children with 2009 pandemic influenza A (H1N1) were hospitalised and 861 (63.2%) were below 5 years. Children below 2 years accounted for over a third (39%) of the patients admitted during the study and almost half (49%) of the mortality. Of the 134 children admitted to the intensive care unit, 101 (75.4%) required mechanical ventilation and 46 (34.3%) died. Pneumonia and acute respiratory distress syndrome was present in 897 (85.5%) and 41 (3.0%) of the hospitalised children respectively including 18 of the 51 (35.3%) non-survivors. The incidence of mortality for children below 12 years, below 5 years and below 2 years, between June through July 2009, was 0.1 per 100 000 corresponding rates between August 2009 through February 2010 was 0.6, 0.9 and 1.3 per 100 000, respectively.

Conclusions The presence of one co-morbid was associated with higher rates of death and relatively a mild disease among hospitalised children in Malaysia.

P1-214 ACCULTURATION, ETHNICITY AND ADOLESCENT MENTAL HEALTH IN THE UK: FINDINGS FROM THE DASH (DETERMINANTS OF ADOLESCENT SOCIAL WELL-BEING AND HEALTH) LONGITUDINAL STUDY

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¹E Lenguerrand,* ²K Bhui, ¹H Seeromanie, ¹M Maynard. ¹*MRC SPSSHU, University of Glasgow, Glasgow, UK;* ²*Centre for Psychiatry, Wolfson Institute of Preventive Medicine, Barts and the London School of Medicine & Dentistry, London, UK*

Background Acculturation is a stressful process of adaptation to societal changes and may influence cultural identity (eg, choice of friendships, religiosity). Ethnic minority boys in the UK, however, have a mental advantage over their White peers. Examining the relationship between cultural identity, ethnicity and psychological well-being may reveal mechanisms for protecting adolescent mental health.

Aim To examine the impact of cultural identity on psychological well-being in an ethnically diverse sample of adolescents.

Method Longitudinal data on psychological well-being (Goodman's Strengths and Difficulties Questionnaire), cultural identity (ethnicity of friendships, racism, migrant status) and potential correlates (eg, socio-economic circumstances) were collected on 4785 adolescents, 80% ethnic minorities, in 51 schools in London, UK. Ethnicity of friendships was used to classify pupils as integrated (many friends of own/other ethnicity), traditional (mostly friends of own ethnicity), assimilated (mostly friends of other ethnicity) and marginalised (few friends). Linear mixed models explored the impact of cultural identity on psychological well-being between 12 and 16 y, and differential effects by ethnicity.

Results Psychological well-being improved through adolescence. Cultural identity was independently associated with psychological well-being among boys, with psychological well-being being most favourable in the integrated group and least so in the marginalised group. This effect did not vary by ethnicity or age and ethnic minority boys maintained a psychological well-being advantage over their White peers. Similar non-significant patterns were observed for girls.

Conclusion Acculturative processes impact on the psychological well-being of adolescent boys, regardless of ethnicity, and raises questions of how best to manage diversity in schools.