P1-283 TRENDS IN AGE AT MENARCHE AND MENOPAUSE OF WOMEN IN VALENCIA COMMUNITY BORN IN DURING 1927–1964 PERIOD

doi:10.1136/jech.2011.142976e.75

[1,2]E Pérez-Sanz,* [1,2]R Peiró-Pérez, [1,2]D Salas, [1]G Vallés, [1,2]J Miranda, [1,2]J Ibañez, [1]A Molina-Barceló. *[1]Centro Superior de Investigación en Salud Pública, Valencia, Spain; [2]Dirección General de Salud Pública, Valencian Community, Spain*

Objective To describe and analyse the trend in age at menarche and menopause of women who have attended the breast cancer-screening program in the Valencian Community (VC) from 1992 to 2009 (born between 1927 and 1964).
Materials and Methods Between 1992 and 2009, a retrospective cohort of participants in a population-based breast cancer-screening program in the VC was assessed. The study population was 695 313 women, 45–69 years. Trends in menarche and menopause aged by educational level (EL), nationality and territory by born cohorts were analysed. A regression analysis by the Joint-Point for the tendency was calculated.
Results The age of menarche is earlier every cohort, 13.31 years (1927–1929) 12.59 years (1960–1964) ($p<0.00001$) by EL, mean 12 997 low EL vs 12 492 university EL ($p<0001$), being Spanish 12 722 vs 13 076 ($p<0.0001$) and living in urban area (12 717 vs 12 788) ($p<0.0001$). While these differences were very marked at the beginning of the period under study these being reduced in the last cohort. Joint point regression analysis shows significant differences in trend by varibles analysed. The age of natural menopause was 49.262 years in the 1927–1929 cohort, and 49.866 years in 1945–1949 ($p<0.0001$). Women with a low EL have an average age of menopause earlier than women of higher EL (49.531 vs 49.822) ($p<0.001$). Regression analysis of the trend shows that the delay was more pronounced for women with no education and primary studies ($p<0.0001$).
Conclusions Menarche has advanced age and menopause is delayed, making broader reproductive cycles exist and different by the social variables studied.

P1-284 VARIATION IN ESTIMATED TEN-YEAR CARDIOVASCULAR RISK ACROSS FOUR RISK SCORING TOOLS IN BOTH A GENERAL POPULATION SAMPLE AND AN OCCUPATIONAL SETTING

doi:10.1136/jech.2011.142976e.76

[1]D O O'Donovan, [1]S Byrne, [2]M Loughrey, [2]G Browne, [2]T Fitzgerald, [2]I Perry,* [1]L Sahm. *[1]Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Cork, Ireland; [2]Department of Epidemiology, University College Cork, Cork, Ireland*

Introduction Several screening tools are now available to estimate 10-year risk of cardiovascular disease (CVD). This study aimed to quantify the differences in CVD risk estimates derived from four widely-used risk scoring tools: Framingham, QRISK2, ASSIGN and SCORE with each tool applied in both a primary care and an occupational screening setting.
Methods The primary care sample data were derived from a cross-sectional study of 1016 men and women aged 50–69 years (median age 59 years, 48.3% male), recruited from 17 primary care practice lists in the south of Ireland. The occupational sample data were derived from a sample of 311 workers, aged 20–63 years (median age 35 years, 72% male), mainly skilled IT and administrative staff, recruited in the workplace. All participants received a standard CVD risk assessment including smoking history and measurement of BP and lipid profile. High CVD risk was defined as 10-year risk >20% for Framingham, QRISK2 and ASSIGN, and >5% for SCORE.
Results In the primary care population the proportion of participants with high 10-year CVD risk ranged from 12.8% (QRISK2) to 33.1% (SCORE). In the occupational setting, the proportion of participants with either intermediate or high 10-year CVD risk ranged from 1.3% (SCORE) to 35.1% (Framingham).
Conclusion This study highlights significant differences between four widely-used CVD risk scoring tools. The differences largely reflect variation in the CVD end points (morbidity or mortality) and risk thresholds used in the tools. This is a potential source of difficulty and confusion for practitioners and policy makers.

P1-285 USE OF LINEAR SPLINE MODELS TO DESCRIBE BI-ETHNIC DIFFERENCES IN EARLY CHILDHOOD GROWTH: FINDINGS FROM THE BORN IN BRADFORD BIRTH COHORT STUDY

doi:10.1136/jech.2011.142976e.77

[1,2]E Petherick,* [2]L Fairley, [3]L Howe, [3]D Lawlor, [4]K Tilling, [2]J Wright. *[1]Paediatric Epidemiology Group, University of Leeds, Leeds, UK; [2]Bradford Institute for Health Research, Bradford, UK; [3]MRC Centre for Causal Analyses in Translational Epidemiology, Bristol University, Bristol, UK; [4]School of Social and Community Medicine, University of Bristol, Bristol, UK*

Introduction Size at birth differs between South Asian and White European infants, but little is known about differences in growth in later infancy. We use multilevel linear spline models to describe ethnic differences in growth of infants from the Born in Bradford study (BIB).
Methods Data for 1378 singleton births from BIB with follow-up visits at 6, 12 and 18 months were used (614 White and 764 Pakistani infants). Weight and length data from clinic visits and routine measurements were used. Mulitlevel linear spline models with knot points at 4 and 10 months were fitted separately for weight and length including interactions with ethnicity and sex.
Results Models for weight and length with knot points at 4 and 10 months fitted the data well; the differences between actual and predicted measurements were small in each period. There were ethnic differences in weight and length at birth; Pakistani boys were on average 0.23 kg lighter (95% CI −0.31 to −0.14) and 1.05 cm shorter (−1.48 to −0.61) than White boys, while Pakistani girls were 0.16 kg lighter (−0.24 to −0.08) than White girls with no significant difference in length. The gains in weight in each time period were similar for both ethnicities. Pakistani boys and girls gained length faster than their White peers between 0 and 4 months.
Conclusions Differences in weight and length by ethnicity arise largely through differences at birth and growth in the early months of life. Further work will investigate relationships between exposures during pregnancy and differences in early life growth trajectories.

P1-286 ARE DIFFERENCES IN SELF-REPORTED HEALTH BEHAVIOURS IN EARLY PREGNANCY ASSOCIATED WITH ETHNICITY? PRELIMINARY RESULTS FROM THE BORN IN BRADFORD BIRTH COHORT STUDY

doi:10.1136/jech.2011.142976e.78

[1,2]E Petherick,* [1]L Fairley, [2]R Parslow, [1]P Raynor, [3]D Leon, [4]D Lawlor, [1]J Wright. *[1]Bradford Institute for Health Research, Bradford, UK; [2]Paediatric Epidemiology Group, University of Leeds, Leeds, UK; [3]Department of Non-communicable disease epidemiology, London School of Hygeine and Tropical Medicine, London, UK; [4]MRC Centre for Causal Analyses in Translational Epidemiology, University of Bristol, Bristol, UK*

Introduction Pregnancy is a time of high motivation to initiate positive changes in health behaviours which have the potential to

continue post pregnancy. Pregnancy outcomes vary between Pakistani and white British pregnant women, but differences in health behaviours during pregnancy between these two groups are under researched.

Methods 4807 (1831 white British, 2222 Pakistani and 754 of Other origin) pregnant women were interviewed at 26–28 weeks of gestation using a questionnaire which collected information on alcohol, cigarette, caffeine, pregnancy vitamin and fruit and vegetable consumption and exercise levels. Latent class analyses were conducted to identify subgroups (classes) of the cohort defined according to clustering of health behaviours. The association between ethnicity, and other characteristics, with class membership was then examined.

Results Five independent classes of health behaviours were identified: three generally healthy classes that differed on alcohol and cigarette consumption, two unhealthy classes; one that smoked but didn't drink and one that was generally unhealthy. Although pregnant Pakistani and Other ethnicity women rarely reported smoking or alcohol consumption compared to white British women, other unhealthy behaviours such as lower rates of exercise and fruit and vegetable consumption were evident. Membership of the comprehensively unhealthy class was more likely in younger, white British pregnant women, of lower educational attainment.

Conclusions These techniques provide better understanding of negative behavioural clusters and characteristics associated with cluster membership. This could aid clinicians' ability to identify pregnant women who would benefit from interventions to modify these behaviours.

P1-287 MATERNAL MORTALITY RATE IN KURDISTAN PROVINCE WESTERN IRAN FROM 2002 TO 2007; AN EPIDEMIOLOGIC SURVEY

doi:10.1136/jech.2011.142976e.79

[1]N Esmailnasab,* [2]A Afkhamzadeh. [1]*Tabriz University of Medical Sciences, Tabriz, Iran;* [2]*Kurdistan University of Medical Sciences, Sanandaj, Kurdistan, Iran*

Introduction Nowadays 1500 mothers die due to complications of pregnancy and delivery in the world. This study is aimed to evaluation the frequency of maternal mortality rate and its associated causes in Kurdistan province Western Iran between 2002 and 2007.

Methods Data for this retrospective cross-sectional study was collected from the national surveillance system documents including information such as age, occupation, literacy, place of delivery, type of delivery, number of pregnancies, previous deliveries, operating labour, prenatal care, maternal mortality causes, and risk factors in labour.

Results A total of 46 maternal deaths were reported. Of them 22 cases (47.8%) were lived in urban areas and 24 deaths (52.2%) occurred in the rural areas. The most frequent maternal deaths were in the age group of 24–29 years (39.2%). Most died women were illiterate (76.7%). The pick point of MMR occurred in the year 2004 (34.8%). Most of deaths were occurred in hospitals (69.6%). One fifth of operating labour were undertaken by uneducated midwifes. Overall, 27.9% of cases had not received any prenatal care during pregnancy or care was incomplete.

Conclusions Time trend of MMR during the period of study has significant changes, so that in the years 2002 to 2004 MMR in Kurdistan was higher than the national average. Poor prenatal care, low maternal education and health service shortages in rural areas in particular were the main risk factors associated with increased rate of MMR in western Iran.

P1-288 PATTERNS OF SOCIAL INEQUALITY AMONG CASES OF MENINGOCOCCAL INFECTION IN SCOTLAND FROM 2005 TO 2008

doi:10.1136/jech.2011.142976e.80

[1]C Phillips,* [2]J Stevenson, [2]G MacKenzie. [1]*The University of Edinburgh, Edinburgh, UK;* [2]*NHS Lothian, Edinburgh, UK*

Introduction Since the introduction of routine immunisation with the Meningococcal serogroup C vaccine (1999), the incidence of meningococcal infections, particularly Meningitis C infection, has steadily fallen in Scotland. However, despite the evident success of the vaccine there is still the issue that certain sub-groups of the Scottish population remain at disproportionate risk of acquiring the disease. We have explored the pattern of meningococcal cases in Scotland between 2005 and 2008 by socio-economic group.

Methods The Carstairs index, developed for 2001 census data, was used to match one of seven deprivation categories to the first four postcode digits of 548 Scottish meningococcal cases notified between 2005 and 2008.

Results Between 2005 and 2008 the incidence of meningococcal infection (per 100 000) in Scotland showed a clear socio-economic gradient. While there was a clear socio-economic gradient in children (6.2 cases/100 000 for least deprived category, 12.6 cases/100 000 for most deprived category), there was no equivalent gradient observed for adults. There was no evidence of increased mortality in more deprived groups.

Conclusions There is a clear socio-economic gradient for meningococcal disease in children in Scotland. This finding is consistent with the internationally recognised influence of social inequality as a risk factor for worse health and increased susceptibility to infectious diseases, Despite major investment to reduce child poverty over the past decade it therefore appears that children from socially deprived areas have increased vulnerability to meningococcal infection. Explanations may include differences in housing, exposure to cigarette smoke and other social factors.

P1-289 THE IMPORTANCE OF THE INVESTIGATION OF DEATHS AND THE COMMITTEE'S ACTION IN THE DIAGNOSIS OF MATERNAL MORBI-MORTALITY

doi:10.1136/jech.2011.142976e.81

[2]M C C Ferreira, [1]R P de Figueiredo,* [1]R Laurenti, [2]C de Maria Barbosa Viana, [2]A A A Falcão, [2]C M C Ribeiro, [2]J E V Câmara. [1]*Department of Epidemiology, School of Public Health, University of Sao Paulo, São Paulo, Brazil;* [2]*Epidemiological Surveillance Division, Municipal Health Secretariat, João Pessoa-PB, Brazil*

Introduction Reducing maternal mortality and guaranteeing universal access to reproductive health are related to the fifth Millennium Development goal; however, the identification of maternal deaths and the trustworthiness and comparability of the data are a challenge for epidemiological surveillance and the Maternal Mortality Committee (MMC), in assessing this information.

Methods All reproductive-aged women's deaths in the city of João Pessoa, Brazil, in 2005–2010, were investigated using multiple data sources (RAMOS). The MMC analysed this information for the correction of the Maternal Mortality Rate (MMR).

Results Investigation and data analysis showed that 44.4% of deaths (24 360) of residents in João Pessoa during 2005–2010 were feminine. Of these, 1417 (13.1%) involved women aged 10 to 49 years. Of the deaths investigated, 25 (1.8%) occurred during pregnancy, childbirth or puerperium (PCP). The MMR found was 36.73/100 000 live-births, with no correction factor. The principal causes of maternal death were: puerperal infection (24%) and