conducted to identify subgroups (classes) of the cohort de
table consumption and exercise levels. Latent class analyses were
alcohol, cigarette, caffeine, pregnancy vitamin and fruit and vege-
table consumption and exercise levels. Latent class analyses were
alcohol and cigarette consumption, two unhealthy classes; one that smoked but
didn’t drink and one that was generally unhealthy. Although preg-
nant 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 compre-
hensively 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

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Introduction Nowadays 1500 mothers die due to complications of pregnancy and delivery in the world. This study is aimed to
evaluate the frequency of maternal mortality rate and its associ-
cated 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%)
ocurred 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 midwives.
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

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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

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 mening-
ococcal 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 ciga-
rette 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

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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
Estimates of avoidable deaths by faecal occult blood test (FOBT) screening for colorectal cancer in the EU

Introduction RCTs have demonstrated CRC screening efficacy. However, programme implementation requires substantial resources. Reliable estimates of the potential screening impact in a population would facilitate timely decisions about establishing programmes. Many countries lack the capacity and detailed knowledge of the distribution of the disease in the population for complex modelling, particularly medium-resource countries. Simple methods for estimating the future impact of CRC screening in such settings would be a useful tool in cancer control planning.

Methods For the 27 EU countries, population projections by country, sex and quinquennium were obtained from the UNpopin database. Country-, sex- and age-specific mortality rates were obtained from GLOBOCAN2002. The method requires stating parameters for the following factors: screening interval, age at screening attendance, participation rate and programme duration. Estimates for these parameters were derived from FOBT RCT results; simultaneous programme introduction throughout a country and high quality management were assumed.

Results 600 000 to 1.05 million CRC deaths could be avoided over 25 years in the EU depending on the screening interval and compliance rate, for programmes offered to the 50–74-year-old population.

Conclusions A method for estimating the population impact of CRC screening has been developed which requires minimum epidemiologic and technical support. The accuracy of the method should be assessed by comparing these preliminary results with sophisticated modelling approaches and with up-to-date estimates of CRC burden in populations in which screening coverage is known. Countries contemplating CRC screening, but lacking detailed knowledge of the disease burden, should develop this capacity in the early translational phase of programme planning.

Integrated disease surveillance and response: performance assessment in a tertiary Nigerian hospital

Introduction Efficient case reporting via the Integrated Disease Surveillance (IDS) system is one of the main strategies to control of Lassa fever. Diagnosing Lassa fever is complicated by similarity of case presentation with common environmental causes of fever like malaria and typhoid, and limited laboratory capacity for identification.

Methods The analysis of the deaths investigated enabled us to clarify all the cases of maternal morbidity-mortality. This study showed how joint surveillance action together with that of the Committee enhances the quality of the information and contributes to the advance of maternal health.

Conclusion Lassa fever is unlikely to be reported through the IDS system. Efforts should target improving institutional compliance with regulations and increased education targeting physicians.

Association between stress, personality traits and sleep bruxism in children: a population-based case-control study

Introduction Sleep bruxism is an unusual orofacial disorder affecting both children and adults. Its consequences include temporomandibular disorder, muscle pain, periodontal problems, tooth wear and tooth loss. Its aetiology remains unclear, and a multifactorial nature has been attributed to pathophysiological, psychological and morphologic aspects. Most studies carried out so far involve adults and few have investigated younger groups. Hence this study aimed to assess the association between stress levels, personality traits and sleep bruxism in children.

Methods A population-based case-control study (proportion of 1:2) was carried out involving 120 children with sleep bruxism and 240 children without this disorder aged between 7 and 11 years. The sample was randomly selected from schools in the city of Belo Horizonte, Brazil. The following instruments were employed for the data collection: questionnaire administered to parents; Child Stress Scale (CSS); and Neuroticism and Responsibility scales of the Big Five Questionnaire for Children (BFI-C). Psychological tests were administered and evaluated by psychologists. Sleep bruxism was diagnosed from parents’ reports. The χ² test, binary and multivariate logistic regression were applied for the statistical analysis.

Results In the adjusted logistic model, children with high level of stress due to psychological reactions (OR=1.8; 95% CI 1.1 to 2.9) and high sense of responsibility (OR=1.6; 95% CI 1.0 to 2.5) had a nearly twofold greater chance of having sleep bruxism in comparison to those with low levels of these psychological traits.

Conclusion High levels of stress and responsibility are associated factors for the development of sleep bruxism among children.

Funding FAPEMING, CNPq.