

Conclusions Significant numbers of children have a low or critically decreased body fat mass. This problem is very vital and has to be evaluated as a highly dangerous risk factor for health and prospective life quality of the children. It is recommended to use FMI when analysing changes in body mass. Hyperdiagnoses of adiposity occurs when BMI is used.

P2-428 H1N1 INCIDENCE AND RATE OF COMPLICATIONS IN PREGNANT WOMEN DURING THE 2009/10 WINTER PANDEMIC

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Introduction Case series suggest pregnant women are at increased risk of contracting H1N1 and experiencing complications. Published studies to date have investigated symptomatic patients or ascertained serology cross-sectionally. Such studies do not allow accurate quantification of incidence and neglect mild disease when estimating complication rates. We investigated H1N1 incidence and rate of complications in unvaccinated women in Scotland during the winter 2009/10 pandemic.

Method We recruited 417 unvaccinated pregnant women who attended hospitals in NHS Lothian in Dec 2009-April 2010. Participants completed a research nurse-administered questionnaire, had venous blood taken and clinical outcomes were extracted from hospital records. Booking blood samples (collected routinely at 10–14 weeks gestation) were retrieved for each participant to allow testing of paired blood samples using the microneutralisation assay. Evidence of infection during pregnancy was defined as a 10-fold increase in H1N1 antibody titre between booking and delivery.

Results Seroconversion between booking and delivery occurred in 10.5% (95% CI 7.1% to 13.9%) with 19 of 32 unaware of acquiring infection. Self-reporting flu symptoms and asthma (but no other chronic conditions) were statistically significant predictors of infection. No significant differences were found in rates of maternal or neonatal hospital admission, critical care admission, birth weight or adverse events between those infected and uninfected.

Conclusion In Scotland where estimated coverage of H1N1 vaccination in pregnancy was 47.6%, relatively few unvaccinated pregnant women experienced H1N1 infection with many infected experiencing minimal symptoms. No increased risk of adverse events was detected but we have low power for this analysis.

P2-429 PREVALENCE OF INFLUENZA A (H1N1) SEROPOSITIVITY IN UNVACCINATED HEALTHCARE WORKERS IN SCOTLAND AT THE HEIGHT OF THE GLOBAL PANDEMIC

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Introduction Susceptibility of healthcare workers (HCW) to influenza is relevant in terms of sickness absence, productivity and onward transmission of infection from carer to patient, a particular issue with a novel influenza strain. The aim of this study was to

determine the seroprevalence of antibodies against the virus in unvaccinated healthcare workers in Lothian, south east Scotland during October- November 2009 (after the first wave of infection, but before the expected increase in cases over the winter period).

Methods Unvaccinated employees (n=493) were recruited within days of the start date of the HCW vaccination programme and prior to most being vaccinated. Participants had a serum sample taken and completed a short questionnaire recording sex, age, occupation, and self-reported history of flu-like symptoms or illness since the start of the pandemic period. Serology specimens were analysed in the West of Scotland Specialist Virology Centre in Glasgow using microneutralisation assays at a dilution of 1:40.

Results The prevalence of seropositivity in HCWs mid-pandemic was 10.3% (95% CI 7.7 to 13.0%), which was higher than pre-pandemic HCW seropositivity rate by 3.7% (95% CI of increase 0.3% to 7.3%, p=0.048). Seropositivity rates for frontline and non-frontline HCWs were similar.

Conclusion To our knowledge, this is the first study in the United Kingdom to quantify the level of seropositivity to influenza A (H1N1) in unvaccinated HCWs pre- and mid-pandemic. Only 10.3% of HCWs were seropositive for influenza A(H1N1) mid-pandemic, so the great majority were still susceptible to infection at the introduction of the vaccination programme.

P2-430 WHO/TDR NEW DENGUE GUIDELINE WORKING BETTER FOR PATIENT CARE

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Introduction Globally Dengue has threatened to infect 3 billion people. TDR/WHO version launched the latest version of Dengue guidelines recently. In this cross sectional study, we compared clinical diagnosis of patients admitting to the hospital with WHO 1997 and TDR/WHO 2009 guidelines. To also explored strengths and weakness of the two classifications.

Methodology Dengue cases admitted from January 2005 to December 2007 at Aga Khan University Hospital, Pakistan were reviewed. Data were recoded using Dengue grading according to the WHO 1997 and TDR/WHO 2009 guidelines. Correlation among the three sets of disease classifications were tested statistically.

Results TDR/WHO 2009 in comparison to the clinical classification showed that out of 612, 24 (4%) patients did not fulfil the new classification. TDR labelled 124 (20%) patients as having Severe Disease, out of which 118 (95%) were labelled as DF, 3 (2.5%) as DHF and 3 (2.5%) as DSS by the physician. (χ^2 18.7, p value 0.005) (Likelihood Ratio 17.9, p value 0.006) Comparing the new guidelines with the old, TDR labels 124 (20%) cases as Severe Disease in comparison to the 24 (4%) by WHO. (χ^2 89.8, p value 0.0001) (Likelihood Ratio 92.1, p-value 0.0001) The value of 0.24 of Cramer's V signifies that there is little association between the two classifications.

Conclusion TDR/WHO 2009 dengue guideline is a better version of WHO 1997 guideline as it is able to identify the critical patients early in the disease course. However, this might lead to over-estimation of disease severity which can be a restraint for developing nation's resources.

P2-431 MARITAL STATUS AND RISK OF HIV INFECTION IN INFORMAL URBAN SETTLEMENTS OF NAIROBI, KENYA: RESULTS FROM A CROSS-SECTIONAL SURVEY

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Objective The objective of this paper is to examine the association between marital status and the risk of HIV infection in the informal settlements of Nairobi. The findings from this study will inform HIV prevention programs, particularly among poor and marginalised groups in the informal settlements.

Methods Data are derived from a cross-sectional population-based survey nested in an ongoing Demographic Surveillance System (DSS) in two urban informal settlements in Nairobi city, where a total of about 60 000 individuals living 23 000 households are under surveillance. Descriptive statistics and multivariate logistic regression analysis were used to describe the characteristics of the sample, as well as to assess the association between marital status and risk of HIV infection.

Results The HIV prevalence of respondents who were divorced, separated or widowed was 27%, among those who were married was 12%, and among those who were never married was 5%. Married respondents (OR=1.78; p value<0.05) and those who were divorced, separated or widowed (OR=4.06; p value<0.001) were significantly more likely to be infected with HIV compared to respondents who were never married. Circumcision was also a significant predictor of HIV infection. Men who were circumcised (OR=0.36; p value<0.05) were less likely to be HIV positive compared to those who were not circumcised.

Conclusion There is need for HIV prevention interventions to adopt a more targeted approach, particularly with regard to designing and implementing programs geared towards addressing the increased risk of HIV infection among married people and those who were formerly married.

P2-432 PATTERNS AND DETERMINANTS OF BREASTFEEDING AND COMPLEMENTARY FEEDING PRACTICES IN URBAN INFORMAL SETTLEMENTS, NAIROBI, KENYA

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Introduction Little evidence exists on breastfeeding and infant feeding practices in urban slums in sub-Saharan Africa. Our aim was to assess breastfeeding and infant feeding practices in Nairobi slums with reference to WHO recommendations.

Methods Data from a longitudinal study conducted in two Nairobi slums are used. The study involves 4299 children aged 0–42 months, born between September 2006 and January 2010, for the period they were infants. All women who gave birth during this period were interviewed on breastfeeding and complementary feeding practices at recruitment and this information was updated twice, at 4-monthly intervals. Cox proportional hazard analysis was used to determine factors associated with cessation of breastfeeding in infancy and early introduction of complementary foods.

Results There was universal breastfeeding with almost all children (99.0%) having ever been breastfed, and 85% were still breastfeeding by the end of the 11th month. Exclusive breastfeeding for the first 6 months was rare (2%). Factors associated with sub-optimal infant breastfeeding and feeding practices in these settings include child's sex; perceived size at birth; mother's marital status, ethnicity, and education level; pregnancy desirability; place of delivery; and slum of residence.

Conclusions The study indicates poor adherence to WHO recommendations for breastfeeding and infant feeding practices. Breastfeeding and infant feeding patterns are associated with child,

maternal and household level characteristics. Interventions and further research should pay attention to factors such as cultural practices, access to and utilisation of healthcare facilities, child feeding education, and family planning.

P2-433 NUTRITIONAL SUPPLEMENTATION IN EARLY LIFE AND FUTURE RISK OF OBESITY: LONG-TERM FOLLOW-UP OF THE HYDERABAD NUTRITION TRIAL

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Introduction Nutritional supplementation programmes for pregnant women and young children exist in much of the developing world, but their long term health consequences, particularly in the context of nutrition transition, are unknown.

Methods The Hyderabad Nutrition Trial was a community trial to evaluate a supplemental nutrition programme for pregnant women and young children (<6 years), conducted in 29 villages (15 intervention, 14 control) near Hyderabad city in India during 1987–1990. The supplement was a cereal based meal providing 2 MJ calories and 20 g protein per day. Children born during the trial period were re-examined ~20 years later, and adiposity was assessed by DXA scans.

Results We recruited 1120 participants (27% female) aged 18–21 years: 581 intervention and 539 controls. The body mass index of the intervention and control participants was similar (19.3 kg/m²). There was some indication of greater adiposity in the intervention arm participants, but these differences were broadly consistent with chance. The total body fat (geometric mean) was 18.0% in the intervention arm, compared to 17.1% in the control arm (ratio: 1.04; 95% CI 0.99 to 1.09). The intervention and control arms had similar levels of central adiposity (8.5 % of the total body fat was in the L1L4 region).

Conclusion In this sample of rural Indians, modest protein-calorie supplementation in early life on the whole was not associated with greater total or central adiposity in young adulthood. Whether stronger differences emerge with age or progression of nutrition transition remains to be established.

P2-434 TRENDS AND EPIDEMIOLOGIC FEATURES OF TUBERCULOSIS IN THE WEST AZERBAIJAN PROVINCE OF IRAN, 2004–2009

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Objective To determine of epidemiologic patterns and recent trends of pulmonary and extrapulmonary tuberculosis in West Azerbaijan province of Iran, during 2004–2009.

Material and Methods In this cross-sectional study, we studied the data of 1323 TB new cases that have been recorded by TB Management Center of Vice-chancellor of health affairs in West Azerbaijan province of Iran. National census data of 2006 were used for determining the incidence rates. Cochran-Armitage test was used to analyse the incidence trends.

Results The incidence rate of tuberculosis at this province was declined from 10.16 to 7.85 per 100 000 during 2004–2009. Despite of higher incidence rates in southern regions, its two districts