

Family Health 1

Chairpersons: B Irons, I Potter

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What is in your baby? Assessing prenatal exposures and potential health outcomes to persistent organic pollutants, pesticides and heavy metals in 10 Caribbean countries

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Objectives: To assess levels of prenatal exposures and potential health outcomes as a result of exposure to persistent organic pollutants (POPs), pesticides and heavy metals in 10 Caribbean countries.

Design and Methods: Approximately 50 maternal blood and urine samples were collected from each participating country. Samples were analysed for POPs, common pesticides used in the Caribbean and two heavy metals, namely mercury and lead. Findings were also compared with those from the United States of America (USA) and Canada.

Results: A total of 442 samples were analysed from the 10 countries. Persistent organic pollutants were detected in almost all samples but levels were generally low. Among the samples, exposures to pyrethroids were found at levels typically seen in tropical environments but were generally much higher than those recorded for North American women. The concentration levels of organophosphates and carbamates found in the samples from mothers from the 10 participating countries were in the low range, except for the level of 2,5-dichlorophenol from some islands.

Conclusion: The findings of this first systematic biomonitoring study on the concentrations of several toxicants in maternal samples taken from 10 countries reveal that pregnant women are exposing their fetuses to various chemical substances known to have adverse health and developmental effects. Therefore, Caribbean governments and public health officials should investigate further so that appropriate interventions could be implemented.

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Prevalence of group B streptococcus colonization in pregnant women in The Bahamas

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Objective: To determine the prevalence of group B streptococcus (GBS) colonization in a randomly selected group of pregnant women attending public antenatal clinics in The Bahamas.

Design and Methods: Four hundred and ninety-two participants between 35 and 37 weeks of gestation attending antenatal public health clinic during February and August 2008 were screened for GBS *via* lower vaginal swab culture. Participants who refused the test, were on antibiotics or had ruptured membranes were excluded. Data on maternal age, nationality, gestational age, parity and mode of delivery were obtained from maternal record.

Results: Among the 492 participants screened, the age ranged from 14–45 years (mean 25.5 ± 6.4); 64.9% were Bahamian, 27% were Haitian and 4% were other nationalities. Thirty-three per cent were primigravida, mean gestational age was 37 (± 1.3) weeks. Of the screened participants, 13.4% were found to be positive for GBS; 56.06% of the GBS positive participants were under 25 years of age. The age group below 20 years showed highest prevalence (18.6%). Maternal nationality, gestational age, parity and mode of delivery did not show any association with GBS prevalence.

Conclusion: Prevalence of GBS colonization in pregnant women in The Bahamas was below typical ranges found among neighbouring countries and the youngest were at highest risk.

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Knowledge and perceptions of HPV and the HPV vaccine among pre-adolescent girls and their guardians in Georgetown, Guyana

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Objective: To determine the knowledge and perceptions of 11-year old girls and their guardians toward human papillomavirus (HPV) mandatory vaccination, cervical cancer, and their main sources of health information.

Design and Methods: A cross-sectional study was done among 11-year old girls and their guardians from five primary schools in Georgetown. Data were collected through face-to-face interviews using a questionnaire.

Results: A total of 87 girls participated, of whom 10 (11%) had already received the HPV vaccine. When asked whether they knew of HPV, the HPV vaccine, cervical cancer, and Pap smear, more than half of the girls reported they did not know. Seventy-four guardians took part and > 80% reported they knew about these parameters except for HPV transmission (40%) and the cause of cervical cancer (30%). Both girls and guardians responded poorly to questions about the detection of cervical cancer. Only two of the 14 girls correctly stated that HPV can be transmitted sexually. Overall, only 34% of respondents were in favour of mandatory vaccination. Health centres/clinics (70%) and TV/radio (75%) were the most popular health information sources.

Conclusions: These findings point to a necessity for educational programmes and activities in which children and their guardians can meaningfully participate and be informed about the different aspects of HPV vaccination.

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The need for a sexual and reproductive health literacy strategy for Eastern Caribbean youth: A literature review and focus group discussions with young people in four countries

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Objective: To provide baseline data and generate new knowledge to inform the development of programmes to support adolescent and youth sexual and reproductive health and rights in Dominica, Grenada, St Lucia and St Vincent and the Grenadines.

Design and Methods: A literature review was conducted of existing research relating to teenage pregnancy, HIV

and sexually transmitted infections (STI) among 10–24 year olds in the four countries. Seventeen single-sex focus group discussions (FGDs) were conducted with 100 people aged 15–17 years. Informed consent was obtained from parents, and young people provided assent before participation.

Results: The literature review showed that a majority of sexually active youth report having sex before the legal age of consent. There is evidence of low condom use, inter-generational and transactional sex and child abuse, alongside the concentration of poverty among children and youth. Young people in FGDs thought that schools and parents provided factual information but youth still lack necessary sexual and reproductive health skills. They requested interactive and experiential learning methods to empower them in the face of multiple sources of sexual imagery and information *via* their peers, popular culture and internet-based technologies.

Conclusion: A new paradigm of sexual and reproductive health education for youth is required, emphasising interaction, participation and critical analysis to achieve health literacy, defined as skills that determine the ability of people to gain access to, understand and use information in ways which promote good health.

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Sexual violence and its consequence in Haiti

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Objectives: To assess the impact of sexual assault on Haitian women and girls who attended GHESKIO clinics.

Design and Methods: Between 2000 and 2008, the GHESKIO clinic in Haiti assessed 2109 women and girls who were victims of sexual assault. Retrospective analysis of the findings on victims was performed. Multivariate analyses were conducted to assess factors associated with psychological state.

Results: Over 70% of the girls under 18 years and 15% of those older had no sexual experience prior to the assault. Over 40% of those 18 years and older were attacked by multiple assailants. Over 85% of the victims reported suicidal thoughts, hypervigilance, and hallucinations. In multivariate analyses, demographic variables associated with three or more visits to GHESKIO for psychological support were 18+ years old (odds ratio (OR) = 2.10, $p < 0.001$), secondary education (OR = 2.27, $p = 0.05$; OR = 3.54, $p < 0.001$), and use of weapon (OR = 2.01, $p = 0.01$). Psychological indices associated with more frequent visits

to clinic were post-traumatic stress disorder (OR = 2.23, $p < 0.001$); depression (OR = 1.74, $p < 0.001$) and psychotic symptoms (OR = 1.77, $p = 0.05$).

Conclusions: Findings indicate that victims experienced serious psychological symptoms. Those 18 years and

older were more likely to attend GHESKIO clinics for multiple sessions. Strategies should address not only the individual treatment of the victim, but also the culture in which they occur, targeting the wider community.