

### Cardiovascular risk profile of HIV patients accessing routine care at a teaching hospital in Ghana

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**Background:** Life expectancy of HIV infected patients has dramatically improved with HAART. Cardiovascular disease is emerging as a major cause of morbidity and mortality. Timely management of CVD risk factors should be the standard of care. We sought to determine the CVD risk profile of HIV patients attending HIV clinic at the Medical Unit of the Komfo Anokye Teaching Hospital (KATH).

**Methods:** In this cross sectional study 345 HIV infected patients aged 16 years and above who presented for routine HIV clinic visit at the Medical Unit of KATH and 161 healthy HIV negative individuals who consented were recruited. Data was collected using a questionnaire; electrocardiography, anthropometric and blood pressure measurements were conducted under standard conditions. Blood samples were obtained for the determination of plasma glucose, CD4 and lipid levels. Data analysis was performed using STATA version 11.

**Findings:** A total of 345 HIV patients were enrolled into the study with 249 (72%) as females. This comprised 172 HIV treatment-naïve patients (113 females; mean age 40.9 ± 10.6 years) and 173 HIV treatment-experienced patients (136 females; mean age 41.7 ± 9.6 years, range). The prevalence of diabetes and hypercholesterolemia was significantly higher among HIV positive patients than HIV negative participants (5% v 0.6%, p= 0.047 and 29% v 15.4%, p=0.002 respectively). Low HDL-C was the most common CVD risk among HIV positive patients although it was significantly higher in the HIV negative group compared to HIV positive patients (66.7% v 53.2%, p=0.007). HIV-1 was the commonest sub-type.

**Interpretation:** Hypertension, diabetes mellitus, dyslipidemia and abdominal obesity are prevalent amongst Ghanaian HIV positive patients accessing HIV care. They ranged from as low as 2% smoking prevalence and as high as 53.2% low HDL-C. There was a strong association between HIV infection and the prevalence of diabetes mellitus. Most patients had a low risk of a major CVD event in the next 10 years based on the low Framingham Risk Score (FRS) and there was no association between CVD risk factors and the HIV subtypes. Common ECG abnormalities included bi-atrial enlargement, low voltages and bundle branch blocks.

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### Maternal barriers and facilitators to implementing recommended nutrition practices in two urban communities in Mumbai, India: a qualitative study

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**Background:** Childhood malnutrition has been a longstanding crisis in Mumbai, India where despite rigorous governmental and non-profit efforts, chronic malnutrition and underweight rates for children under five are 47% and 36% respectively. Several studies suggest that maternal caregiving practices directly impact a child's growth during the first two years of life. In 2004, India adopted and implemented the IYCF (Infant and Young Child Feeding) guidelines to improve child nutrition, yet across India, there is poor adherence to IYCF recommended practices. This study is an in depth qualitative assessment of maternal barriers and facilitators to implementing recommended nutrition practices in two Mumbai slum sites, within the context of an existing IYCF-based education intervention by the Foundation for Mother and Child Health, India.

**Methods:** The population was purposively sampled to represent varying household demographics including maternal age, maternal education, average family income, average family size, and number of children. The data were collected through 33 in depth qualitative interviews with mothers (27) or paternal grandmothers (6) of children aged 0-2 years, and 12 ethnographic observations: (6 participant observations in health clinics and 6 in-home observations of child feeding practices). Transcripts were translated and transcribed, and analyzed along with typed field notes using qualitative analysis procedures and NVivo software.

**Results and Conclusion:** A complex interaction of barriers and facilitators produces specific behaviors of mothers, which could better inform existing education-based interventions. Key barriers to implementing recommended nutrition practices included: poor hospital and/or family support when caring for an infant, low maternal self efficacy when seeking advice or making decisions, conflicting information from many sources, and lack of knowledge, experience or agency in performing certain actions. Specific facilitators enabling implementation of recommendations were: maternal desire for a healthy and intelligent child, family and organizational support, positive infant response in complementary feeding, mother's self-efficacy in caring for her child's nutritional requirement and overall health, and family support.

**Interpretation:** Overall, child nutrition interventions need to provide more family oriented education, improve alignment with existing healthcare infrastructures, and focus on maternal empowerment and support.

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### Building sustainable programs from brigades: development and implementation of a student-led global health program at the University of Florida

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