

Impact of CVD knowledge, risk perception, and barriers to healthcare on routine CVD management in Coimbatore, India

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Background: Cardiovascular disease (CVD) prevalence in urban India has increased 9-fold over the past decade and attributes to nearly 25% of deaths nationwide. It has been shown that diabetes and hypertension are 2 of the greatest risk factors for developing CVD. The goal of this study was to explore factors influencing the likelihood of CVD care follow-up in diabetic and hypertensive patients in a primary care setting in Coimbatore, India. This project evaluated the relationship between CVD knowledge, personal risk perceptions, healthcare barriers and self-reported CVD-related follow-up care plans. The study was designed to address CVD care limitations and to initiate effective educational programs in India.

Methods: A survey instrument was administered to patients attending a primary care center in Coimbatore, India. The participants were Indians greater than 18 years of age, who had a confirmed diagnosis of diabetes and/or hypertension and were not previously diagnosed with CVD. The primary outcome of the study was to investigate the factors contributing to the likelihood of receiving CVD care and the relationships between these predictors. The study was approved by the Kovai Medical Center and Hospital ethics committee and University of Connecticut IRB. After accepting the invitation to participate, participants were read the informed consent form and verbal consent was obtained.

Findings: 229 subjects (82 diabetics, 81 hypertensives, 66 both) were analyzed in this study. Patients with DM alone had increased knowledge scores compared to those with HTN alone (19.43 ± 2.5 vs 16.56 ± 3.37 , $p < 0.05$). In those with a single diagnosis, there was a higher risk perception in diabetics (25.8 ± 7.45) than hypertensives (21.2 ± 2.47) $p < 0.01$. There was also a positive correlation between increasing BMI and risk perception ($r = 0.169$, $p < 0.01$). There was a positive correlation between CVD knowledge and risk perception ($r = 0.369$, $p < 0.001$), healthcare barriers and GP follow-up for CVD care ($r = 0.164$, $p < 0.05$) and cardiologist ($r = 0.229$, $p < 0.001$). Conversely, an inverse correlation between healthcare barriers and cardiologist follow-up was demonstrated ($r = -0.279$, $p < 0.001$).

Interpretation: These findings suggest that increased CVD knowledge is associated with greater personal risk perception. Greater risk perception is associated with self-reported intention to receive preventive CVD care. Individuals with greater barriers to healthcare are more likely to follow-up with a GP than a cardiologist. These data suggest a role for primary preventive CVD care and education in primary care settings. Interventions focused on patients with HTN may be particularly effective in this setting. The small sample size and self-reported variables were limitations. This study was funded by the UCHC Student Research Program.

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Emergency medical services are a critical component of maternal and child health in East Africa

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Background: Emergency Medical Services (EMS) are essential to the treatment of critically ill patients, who often have time-sensitive conditions. The importance of EMS has recently gained recognition in Africa, with an associated increase in prehospital care in countries such as Ghana, Uganda and Kenya. However, EMS systems in Africa treat dramatically different patient populations than those in the West. An accurate understanding of ambulance use in Africa is essential for the delineation of local resources and for EMS curriculum development. A longstanding priority for global health intervention is maternal and child health, but the importance of prehospital care to these at risk populations in Africa is not well known. In rural Uganda 66% of ambulance usage is for obstetric complaints; it is unclear if this pattern of usage holds in urban areas.

Methods: We are carrying out a retrospective chart review of Patient Report Forms from all patients transported in Nairobi, Kenya, by the two primary ambulance services, Emergency Plus and Saint John Ambulance, from July 1, 2013 to June 30, 2014.

Findings: Preliminary results—based on 1172 records, representing 30% of total data—indicate that 34% of ambulance activations were for children ≤ 19 years and approximately 12% of calls were for obstetric complications, primarily fetal distress and prolonged labor. Additional analyses, including a prospective arm of this study, are pending.

Interpretation: These data demonstrate increased utilization of EMS for maternal and child health emergencies in both urban and rural Africa relative to the United States, where pediatric patients ≤ 19 years constitute only 8%, and obstetric emergencies only 0.5%, of ambulance activations. EMS systems in the United States have appropriately focused their critical care education and resources on cardiopulmonary and traumatic complaints over maternal and child health. However, in Kenya, first responders are largely taught by curricula developed in the United States. Our results indicate that additional training in maternal and child health for Kenyan first responders may improve the care and treatment of these patients.

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Road traffic injuries and near misses among adolescents in Galle, Sri Lanka

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Background: Road traffic injuries (RTI), as the 8th leading cause of deaths worldwide, caused an increasing number of morbidity and mortality in Sri Lanka especially among young vulnerable road users. However, few studies provided evidence on the risk and related modifiable factors that adolescents are facing to support the policy making on injury prevention. Therefore, this study aims at investigating the prevalence of road traffic crashes and near misses among adolescents in Galle, Sri Lanka and identifying the risk factors.

Methods: A cross-sectional survey was conducted in 16 high schools in Galle, Sri Lanka during May-July 2014. Students aged between 16-