Abstracts from international Emergency Medicine journals

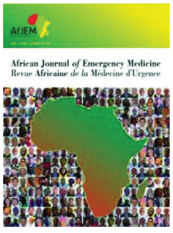
Editor's note: EMJ has partnered with the journals of multiple international emergency medicine societies to share from each a highlighted research study, as selected by their editors. This edition will feature an abstract from each publication.

Ellen J Weber

African journal of Emergency Medicine

The official journal of the African Federation for Emergency Medicine, the Emergency Medicine Association of Tanzania, the Emergency Medicine Society of South Africa, the Egyptian Society of Emergency Medicine, the Libyan Emergency Medicine Association, the Ethiopian Society of Emergency Medicine Professionals, the Sudanese Emergency Medicine Society, the Society of Emergency Medicine Practitioners of Nigeria and the Rwanda Emergency Care Association

Epidemiology of injuries and outcomes among trauma patients receiving prehospital care at a tertiary teaching hospital in Kigali, Rwanda



Mbanjumucyo G, George N, Kearney A, Karim N, Aluisio AR, Mutabazi Z, Umuhire O, Enumah S, Scott JW, Uwitonze E, Nyinawankusi JD, Byiringiro JC, Kabagema I, Ntakiyiruta G, Jayaraman S, Riviello R, Levine AC

Introduction Injury accounts for 9.6% of the global mortality burden, disproportionately affecting those living in low- and middle-income countries. In an effort to improve trauma care in Rwanda, the Ministry of Health developed a prehospital service, Service d'Aide Médicale Urgente (SAMU), and established an emergency medicine training program. However, little is known about patients receiving prehospital and emergency trauma care or their outcomes. The objective was to develop a linked prehospital–hospital database to evaluate patient characteristics, mechanisms of injury, prehospital and hospital resource use, and outcomes among injured patients receiving acute care in Kigali, Rwanda.

Methods A retrospective cohort study was conducted at University Teaching Hospital – Kigali, the primary trauma centre in Rwanda. Data was included on all injured patients transported by SAMU from December 2012 to February 2015. SAMU's prehospital database was linked to hospital records and data were collected using standardised protocols by trained abstractors. Demographic information, injury characteristics, acute care, hospital course and outcomes were included.

Results 1668 patients were transported for traumatic injury during the study period. The majority (77.7%) of patients were male. The median age was 30 years. Motor vehicle collisions accounted for 75.0% of encounters of which 61.4% involved motorcycles. 48.8% of patients sustained injuries in two or more anatomical regions. 40.1% of patients were admitted to the hospital and 78.1% required surgery. The overall mortality rate was 5.5% with nearly half of hospital deaths occurring in the emergency centre.

Conclusion A linked prehospital and hospital database provided critical epidemiological information describing trauma patients in a low-resource setting. Blunt trauma from motor vehicle collisions involving young males constituted the majority of traumatic injury. Among this cohort, hospital resource utilisation was high as was mortality. This data can help guide the implementation of interventions to improve trauma care in the Rwandan setting.

Annals of Emergency Medicine

Official Journal of the American College of Emergency Physicians

Why Diversity and Inclusion Are Critical to the American College of Emergency Physicians' Future Success

Rebecca Bollinger Parker, Steven J. Stack, Sandra M. Schneider, ACEP Diversity Summit 2016 Attendees

To ensure the future success of our specialty and organization, ACEP's Board of Directors is moving forward "to promote and facilitate diversity, inclusion, and cultural sensitivity" as an integral part of the ACEP Strategic Plan. As discussed below, fostering broad and inclusive participation in ACEP's efforts enhances the array of thoughtful and innovative ideas brought forth, mitigates against unconscious bias, and directly increases the likelihood of future success for our College and specialty.

The United States has long been culturally varied and is becoming even more so today. Women now make up more than half of the population,[1] and America is becoming an increasingly racially and ethnically diverse society as reported by the U.S. Census Bureau.[2] Today, minority groups (i.e. any group other than non-Hispanic white) comprise roughly 38% of our population and are projected to become the collective majority as early as 2044.[2] Most large American cities, and some of the largest and fastest growing states, have populations in which minorities are now collectively the majority, or will be in the near future.[3]

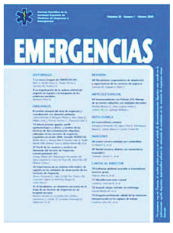
As a specialty, emergency medicine is in a unique position to serve this diverse population. For some of our nation's emergency departments (EDs), patients from minority backgrounds comprise the majority of their patient visits. This trend will increase for the forseeable future as the population diversifies.

Emergencias

Official Journal of the Spanish Society of Emergency Medicine (SEMES)

Dispatchers' impressions and actual quality of cardiopulmonary resuscitation during telephone-assisted bystander cardiopulmonary resuscitation: a pooled analysis of 94 simulated, manikin-based scenarios

Raphael van Tulder, Roberta Laggner, Dominik Roth, Mario Krammel, Christoph Schriefl, Calvin Kienbacher, Heinz Novosad, Christof Constantin Chwojka, Fritz Sterz, Christof Havel , Wolfgang Schreiber, Harald Herkner



Objective The quality of telephone-assisted cardiopulmonary resuscitation (CPR) needs improvement. This study investigates whether a dispatchers' perception is an adequate measure of the actual quality of CPR provided by laypersons.

Method Individual participant data from 3 randomized simulation trials, with identical methodology but different interventions, were combined for this analysis. Professional dispatchers gave telephone assistance to laypersons, who each provided 10 minutes of CPR on a manikin. Dispatchers were requested to classify the quality of providers' CPR as adequate or inadequate. Based on actual readings from manikins we classified providers' performance as adequate at 5–6 cm for depth and 100–120 compressions per minute (cpm) for rate. We calculated metrics of dispatcher accuracy.

Results Six dispatchers rated the performance of 94 laypersons (38 women [42%]) with a mean (SD) age of 37 (14) years. In 905 analyzed minutes of telephone–assisted CPR, the mean compression depth and rate was 41 (13) mm and 98 (24) cpm, respectively. Analysis of dispatchers' diagnostic test accuracy for adequate compression depth yielded a sensitivity of 65% (95 CI 36%–95%) and specificity of 42% (95% CI, 32%–53%). Analysis of their assessment of adequate compression rate yielded a sensitivity of 75% (95% CI, 64%–86%) and specificity of 42% (95% CI, 32%–52%). Although dispatchers always underestimated the actual values of CPR parameters, the female dispatchers evaluations were less inaccurate than the evaluations of make dispatchers; the dispatchers overall (males and females together) underestimated the adequacy of female laypersons' CPR performance to a greater degree than female dispatchers did.

Conclusion The ability of dispatchers to estimate the quality of telephone-assisted CPR is limited. Dispatchers estimates of CPR adequacy needs to be studied further in order to find ways that telephone-assisted CPR might be improved.