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REGULAR FEATURES

Uchunguzi (Journal Watch/*Montre de Journal*)

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Uchunguzi means investigation in Swahili and provides a summary of some of the most recent international literature as presented in other leading journals, but with an emphasis on what is relevant to our continent.

Island emergency care

Emergency medicine is not recognised or taught as an independent specialty in Madagascar. Efforts to develop effective and regionally-appropriate emergency care systems in sub-Saharan Africa are hindered by lack of data on both the burden of disease in the region and on the state of existing care delivery mechanisms. This retrospective chart review aimed to describe the burden of acute disease presenting to an emergency unit in one of two teaching hospitals in Madagascar. Of the 5138 patients seen in the emergency centre between 1 January 2011 and 30 September 2012 included in the study, trauma accounted for 48% of the cases, infectious disease for 15%, mental health 6.1%, non-communicable diseases 29%, and neoplasms 1.2%. The acuity seen was high, with an admission rate of 43%. Similar findings from studies in Kenya and Tanzania highlight the shifting burden of disease in sub-Saharan Africa from the traditional infectious diseases to more western style trauma and non-communicable diseases. As emergency care systems develop on the continent, data from such studies will definitely serve to guide the development of context-appropriate systems.

Kannan VC, Andriamalala CN, Reynolds TA. The burden of acute disease in Mahajanga, Madagascar – A 21 month study. *PLoS One* 2015;**10**(3):e0119029.

Family-witnessed resuscitation in Rwanda

In today's healthcare environment, involving the family in the care of the patient, even during resuscitation, is important for quality healthcare. The positive benefits of having family members present during resuscitation (family-witnessed resuscitation (FWR)) include the development of a bond with the resuscitation team, the provision of a more humane atmosphere allowing for closure, and the family's satisfaction of knowing that their family member is in safe hands. Results from a recent study in Rwanda demonstrated that most of the healthcare workers interviewed were unsure of the meaning of the concept and how it was implemented in practice. On discussing the benefits, one participant said 'I think when you have a relative near to you when you are resuscitating … the benefits firstly include [the] fact that relatives are watching whatever you are doing, and secondly it helps them psychologically because they are witnessing that you did the best you could' while another commented, 'I see that it can reduce conflicts between relatives and the medical team and it can also help to give information at the end of resuscitation procedure because the family has followed the extraordinary efforts made by the resuscitation team.' The participants did however describe the many challenges they perceived in relation to FWR including, 'there are some manoeuvres seen by relatives as harmful, like chest compressions … the next of kin will perceive it like you are killing the patient.' FWR is definitely a new concept in the region and while it may be offered as an option for families, more local research on the subject is definitely warranted.

Havugitanga P, Brysiewicz P. Exploring healthcare professionals' perceptions regarding family-witnessed resuscitation in

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http://dx.doi.org/10.1016/j.afjem.2015.04.002

a hospital in Kigali, Rwanda. *S Afr J Crit Care* 2014;**30**(1):18–21.

Experience of the injured patient

Injury is a leading cause of death and disability in low- and middle-income countries. Kenya has a particularly high burden of injuries, accounting for 88.4 deaths per 100,000 population. In this qualitative study, the authors used key informant interviews and focus groups to describe the experience of the injured patient at the district level in Kenya from the time of injury through their hospitalisation. Once an injury occurred, community members are the first to arrive on the scene and usually assume one of three roles: those who try to help the injured, those who are on-lookers, and those who take advantage of the scene "to steal" and "to rob." "Any first aid—any care—is a foreign thing as far as the community is concerned." "We do not have a system of emergency trained medical technicians. It's not in Kenya yet." "Once [the injured] are extracted from the wreck, there is no good means of transportation to the facility. They stop any vehicle passing by and victims are just thrown in any form of transport and rushed to the nearest hospital." Once they arrive at the hospital, the injured are given first priority and immediately seen at the emergency centre. While the triage departments were staffed full-time by clinical officers, if a medical officer is required at night, the hospital ambulance, staffed by a driver and a watchman, will transport the medical officer to the hospital. Respondents thought enhanced trauma care training was necessary for all health care providers, regardless of the extent of their prior experience. This study specifically presents the perceptions and opinions of the systems reportedly used at the district level to triage and transport the injured patient from the scene of the injury which are useful findings to inform future regional and national trauma care systems.

Wesson HK, Stevens KA, Bachani AM, et al. Trauma systems in Kenya: a qualitative analysis at the district level. *Qual Health Res* 2015 Jan 6. pii: 1049732314562890 [Epub ahead of print].

State of emergency care in Freetown

Underdeveloped emergency medical services are associated with poor health outcomes. This has led to an increasing global recognition of the role of emergency medical services in improving population health. An essential first step to developing emergency medical services is performing a structured needs assessment to establish existing capacity and identify priorities for development. This was the main objective of this study that evaluated the emergency care capacity at a sample of seven public and private hospitals in Freetown, the capital of Sierra Leone. A structured set of minimum standards necessary to deliver emergency and critical care in the low-income setting was used to evaluate capacity. The key dimensions of capacity evaluated were infrastructure, human resources, drug and equipment availability, training, systems, guidelines and diagnostics. Based on the findings, substantial deficiencies in capacity were demonstrated across the range of indicators and predominantly affecting publically funded facilities. Capacity was weakest in the domain of infrastructure, while the strongest areas of capacity overall were in drug availability, and human resources. A marked disparity was noted between public and private healthcare facilities with consistently lower capacity in the former. In light of increasing international recognition of the role of emergency medicine in improving population health, improving emergency care delivery in government hospitals should be a priority for local policy makers.

Coyle RM, Harrison HL. Emergency care capacity in Freetown, Sierra Leone: a service evaluation. *BMC Emerg Med* 2015;**15**(1):2.

Point-of-care ultrasound training for mid-level emergency care providers

Physicians are an extremely limited resource in Africa, with a projected shortage of 800,000 physicians over 31 sub-Saharan African countries by 2015. In addition, radiographic services are also frequently unavailable for a wide variety of reasons. Training non-physician clinicians (nurses, midwives, mid-level providers, etc.) to perform tasks that formerly were performed only by physicians or physician specialists has been proposed as a potential method to address this limited human capacity and make emergency care universally available in these areas. In addition, point-of-care (POC) ultrasound training of these non-physician clinicians provides an attractive solution to the scarcity of imaging services in low-income settings. A recent review of 58 studies of ultrasound use in 32 low and middle income countries demonstrated that ultrasound changed the management plans of treating clinicians in 30–86% of cases. This study from Uganda recently evaluated 2185 POC ultrasound examinations performed on 1886 patients from November 2009 to March 2014 by 13 trained nurses who practice as independent advanced practice providers following a 2 year training programme. Most common uses of POC were the focused assessment with sonography in trauma examination (53.3%) and echocardiography (16.4%). Positive findings were documented in 46% of all examinations. The study findings suggest that if educated, non-physician clinicians in resource limited settings can adopt ultrasound into their clinical practice rapidly and utilise it frequently to guide clinical decision making.

Stolz LA, Muruganandan KM, Bisanzo MC, et al. Point-of-care ultrasound education for non-physician clinicians in a resource-limited emergency department. *Trop Med Int Health* 2015; http://dx.doi.org/10.1111/tmi.12511 [Epub ahead of print].

Tick Tock

There is a phenomenon in trauma care known as the 'Golden Hour', which is commonly used to characterise the urgent need for the care of trauma patients. This term implies that morbidity and mortality are affected if care is not instituted within the first hour which occurs immediately after injury. A large part of the Golden Hour is usually taken up by the travel time to and from a crash scene. In this study from Western Cape, South Africa, a total of 7210 fatalities (death occurring within a 6 day period of the crash) that occurred in the 2000–2007 period were mapped and analysed to calculate the likelihood that rural road crash victims are able to receive appropriate medical trauma care within the Golden Hour. In the findings, 3825 (53.1%) of the fatalities occurred out of reach of the

required care within the so called Golden Hour. Interestingly, the number of fatalities occurring out of reach of a 90 min 'Golden Hour' period was less 30.2% (i.e. 53.1% vs. 22.9%) suggesting potential survival benefit for victims managed within even 90 min. The analysis also revealed that there were no 'definitive care' medical facilities within the Golden Hour reach of an Emergency Medical Services' (EMS) station. This study provides a logical way of planning EMS services and medical facilities closer to where they are needed most if trauma victims are to receive care within the Golden Hour.

Vanderschuren M, McKune D. Emergency care facility access in rural areas within the golden hour?: Western Cape case study. *Int J Health Geogr* 2015;**14**:5.

Conflict of interest

The author declare no conflict of interest.