African Journal of Emergency Medicine (2015) 5, 153–158

African Federation for Emergency Medicine

African Journal of Emergency Medicine

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COMMENTARY

The state of emergency care in Democratic Republic of Congo

L'état des soins d'urgence en République démocratique du Congo

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Received 20 March 2015; revised 7 July 2015; accepted 5 August 2015; available online 21 September 2015

The Democratic Republic of Congo (DRC) is the second largest country on the African continent with a population of over 70 million. It is also a major crossroad through Africa as it borders nine countries. Unfortunately, the DRC has experienced recurrent political and social instability throughout its history and active fighting is still prevalent today. At least two decades of conflict have devastated the civilian population and collapsed healthcare infrastructure. Life expectancy is low and government expenditure on health per capita remains one of the lowest in the world. Emergency Medicine has not been established as a specialty in the DRC. While the vast majority of hospitals have emergency rooms or *salle des urgences*, this designation has no agreed upon format and is rarely staffed by doctors or nurses trained in emergency care. Presenting complaints include general and obstetric surgical emergencies as well as respiratory and diarrhoeal illnesses. Most patients present late, in advanced stages of disease or with extreme morbidity, so mortality is high. Epidemics include HIV, cholera, measles, meningitis and other diarrhoeal and respiratory illnesses. Lack of training, lack of equipment and fee-for-service are cited as barriers to care. Pre-hospital care is also not an established specialty. New initiatives to improve emergency care include training Congolese physicians in emergency medicine residencies and medic ranger training within national parks.

La République démocratique du Congo (RDC) est le deuxième plus grand pays du continent africain, avec une population de plus de 70 millions d'habitants. Il s'agit également d'un carrefour majeur pour l'Afrique, le pays partageant des frontières avec neuf pays. Malheureusement, la RDC a été le théâtre d'instabilité politique et sociale récurrente au cours de son histoire, et des combats sont toujours en cours à l'heure actuelle. Au moins deux décennies de conflit ont dévasté la population civile et anéanti les infrastructures de santé. La durée de vie est faible, et les dépenses publiques de santé par personne restent au nombre des plus faibles du monde. La médecine d'urgence n'a pas été élevée au rang de spécialité en RDC. Si la grande majorité des hôpitaux dispose de salle des urgences , cette désignation n'est associée à aucun format convenu et il est rare d'y trouver des médecins ou infirmières formés aux soins d'urgence. Les motifs de consultation incluent les urgences de chirurgie générale et obstétrique, ainsi que les maladies respiratoires et diarrhéiques. La plupart des patients se présentent tardivement, à des stades de maladie avancée ou avec une morbidité extrême, la mortalité est donc élevée. Les épidémies incluent le VIH, le choléra, la rougeole, la méningite et autres maladies diarrhéiques et respiratoires. L'absence de formation, d'équipement et le fait que les services soient facturés à l'acte sont cités comme des obstacles aux soins. Les soins préhospitaliers ne constituent pas non plus une spécialité reconnue. Les nouvelles initiatives visant à améliorer les soins d'urgence incluent la formation des médecins congolais à la médecine d'urgence en résidence, ainsi qu'une formation d'infirmier destinée aux gardes forestiers dans les parcs nationaux.

African relevance

- Emergency medicine is not a specialty in the Democratic Republic of Congo but both a need and desire exist for it to be.
- At present, foreign emergency physicians train generalists in Democratic Republic of Congo, or doctors seek emergency medicine training outside DRC.
- Inroads have been taken to establish pre-hospital training for some park rangers in Democratic Republic of Congo.

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Peer review under responsibility of African Federation for Emergency Medicine.

ELSEVIER **Production and hosting by Elsevier**

Introduction

Interest in emergency medicine (EM) has significantly increased over the past decade on the African continent.

http://dx.doi.org/10.1016/j.afjem.2015.08.001

Dedicated postgraduate EM residency training programmes now exist in nine countries: Ethiopia, South Africa, Republic of Tanzania, Sudan, Egypt, Botswana, Ghana and Uganda with post-graduate EM training also reported in Rwanda, Kenya and in Democratic Republic of Congo (DRC). Despite this growth, there is little published information available about many of these programmes and there is no current mechanism to track individual efforts or share best practices.

The purpose of this manuscript is to report on the state of EM in Democratic Republic of Congo. This report was written as part of the on-going series on the state of EM for the African continent featured by the African Journal of Emergency Medicine. Given that many countries in Africa have well-known high burdens of trauma and unacceptably high all-cause mortality in emergency centres, initiatives such as this are one means to develop and improve emergency patient care on this important continent.

This descriptive report is divided into eight sections: methods of investigation, country background, general health, healthcare infrastructure, healthcare education, emergency medicine, pre-hospital care, and finally a short synopsis on progress to date towards building emergency medicine systems within the country.

Methods of investigation

Little information is available on health systems in Democratic Republic of Congo. Authors primarily used two methods as sources for this manuscript. First, an extensive review of the literature was done using online sources, PUBMED, Google scholar, USAID and WHO. Search terms included, ''Democratic Republic of Congo'' and ''health'', ''war'', ''epidemics'', ''gender based violence/sexual violence'', ''emergency medicine'', ''salle des urgences'', ''Africa & epidemics'', ''medical education'', and ''African medical education''. The search yielded 243 citations that directly related to DRC, only 52 of which were of interest on abstract review. DRC and war rendered 21 citations, DRC healthcare systems – eight citations, DRC emergency medicine – three citations, DRC medical education – two citations and DRC health and sexual violence more than 18 citations.

Second, in order to obtain information regarding current emergency care, a semi-structured questionnaire was administered to healthcare providers who staff emergency centres (referred to locally as salle des urgences but for this manuscript will be referred to as emergency centres). Respondents were contacted by chain referral sampling. The questionnaire was in French, the official language in the DRC. The questionnaire has 14 closed and open-ended questions. Questionnaire responses were hand-tallied and responses most reported were included in the written section of the manuscript.

Country background

The DRC is the second largest country on the African continent (Nigeria being the largest) with a population of over 70 million. DRC is considered a major African continental crossroad being bordered by Rwanda, Uganda, Burundi and Tanzania to the east, Central African Republic and South Sudan to the north, Angola and Zambia to the south and Republic of Congo to the west. Formally established as a Belgian colony in 1908, DRC gained independence in 1960, became Zaire in 1972 and formally DRC in 1997. DRC is now host to over 200 different ethnic groups and distinct languages with French, Lingala, Kingwana, Kikongo, and Tshiluba considered the national languages.[1,2]

DRC has experienced recurrent political and social instability since its civil war (1997–2003), and active conflict remains today most notably in the east despite the signing of multiple peace accords. Often referred to as *Africa's World War*, the conflict has created areas of chronic insecurity and over 1.7 million internally displaced persons.[3] In 1999, the UN Security Council mandated a UN Peacekeeping mission to stabilise the area and protect civilians. This force is now called MONUSCO and maintains over 16,500 uniformed peacekeepers. Unfortunately, eastern DRC still continues to be home to multiple armed groups with fighting despite MONUSCO's presence.[4–6]

The conflict in DRC has resulted in a health-system collapse and created a humanitarian disaster.[7,8] An estimated 5.4 million excess deaths occurred from 1997 to 2004, with fewer than 10% attributable to violence and the rest to preventable and treatable medical conditions such as malaria, diarrhoea, pneumonia and malnutrition.[9] In eastern Congo, the prevalence of rape and other sexual violence is documented as among the highest in the world.[10–12]

General health

DRC has a very low standing in the Human Development Index (168/169) and is at the bottom of two major indices of well-being; maternal mortality at 545/100,000 and infant mortality at 92/1000 live-births.[13–15] Life expectancy at birth is low at 48 years. The population is generally young with an estimated median age in 2012 of 17.4 years.[31] No national census has been completed since the republic was formed so population-based statistics are estimated. About 70% of the population lacks access to adequate food, and one child in four is malnourished. Causes of food insecurity include population displacements, lack of access to basic social services, low agricultural productivity, lack of road infrastructure and chronic poverty.[16] In 2012, the main causes of morbidity and mortality were malaria, HIV/AIDS, tuberculosis, parasitic infections, respiratory infections, malnutrition and reproductive health issues.[14,15]

Epidemics are a part of life for most Congolese, most notably measles, cholera and meningitis. Infected patients often present in extremis due to lack of vaccination programmes, poor healthcare access and fee-for-service barriers.[17] The most recent large meningitis outbreak was in 2009 in Western DRC.[18] The WHO last declared a measles epidemic in 2012 and documented 3,896 cases of cholera with 265 associated deaths the same year.[19–22] Helminth diseases including ascaris, hookworm and trichurus are endemic with greater than 50% of paediatric and women of child bearing age testing stool positive in South Kivu Province in the eastern part of the country and Maniema Province in the central part of the country.[23] Helminth infestation is thought to be at least one cause of the large prevalence of anaemia, diarrhoeal disease and chronic malnourishment.

Prevalence of HIV averages 8–9% in urban areas and 1.1% in the eastern areas of conflict. Only 12% of HIV-positive