Time to standardise levels of care amongst Out-of-Hospital Emergency Care providers in Africa

Le temps est venu de normaliser les niveaux de soins entre les fournisseurs de soins d'urgence hors de l'hôpital en Afrique

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The African Federation for Emergency Medicine’s Out-of-Hospital Emergency Care (OHEC) Committee convened 15 experts from various OHEC systems in Africa to participate in a consensus process to define levels of care within which providers in African OHEC systems should safely and effectively function. The expert panel concluded that four provider levels were relevant for African OHEC systems: (i) first aid, (ii) basic life support, (iii) intermediate life support, and (iv) advanced life support. Definitions for each provider level were also created to aid standardisation of providers across Africa and to help advance the practice of OHEC.

In 2013, the African Federation for Emergency Medicine (AFEM) took the first step towards both simplifying current terminology and defining systems models for Out-of-Hospital Emergency Care (OHEC). Through expert consensus aimed at the African context, OHEC was defined as the umbrella term referring to “the full spectrum of emergency care that occurs outside of healthcare facilities.” OHEC may be provided in one of two systems: where care is delivered by bystanders and volunteers (tier-one systems) or by professional medical responders (tier-two systems); both have key roles to play in improving outcomes in the region.1,2 Emergency medical services (EMS), a tier-two system, describes “formalised prehospital care, provided by emergency care professionals who respond to medical emergencies within a well-defined jurisdiction.”

Results from a recent survey of African EMS systems revealed many terms in use across the continent to describe EMS providers, including: emergency medical technicians (EMTs), ambulance assistants, ambulance drivers, ambulance technicians, paramedics, medics, and prehospital nurses.3 There was wide geographic variability, whereby providers apparently at the same level were providing very different levels of care under very disparate scopes of practice.3 This lack of standardisation among EMS systems makes resource sharing, research harmonisation, and development coordination very challenging in systems already under extreme resource constraints.

The mission of the AFEM OHEC Committee is to assist with safe, effective, and responsible development of OHEC systems in Africa through advocacy, technical assistance, and dissemination of quality information.1,2 To advance OHEC in Africa, to foster resource sharing, and to improve collaboration, the AFEM OHEC Committee identified a strong need to define levels of care, and subsequently to delineate the specific elements of care within each provider level.

From July to August 2014, the AFEM OHEC Committee convened 15 experts from various OHEC systems in Africa to participate in a consensus process to define levels of care within which providers in African OHEC systems should safely and effectively function.

The expert panel defined providers relevant to the two-tier OHEC structure previously established at the 2013 AFEM
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Consensus Conference. Beginning with tier-one, experts were requested to individually and confidentially propose a unique definition for each level of care (or critical components of a definition). They were provided a simple template definition adopted by the Health Professions Council of South Africa.\(^4\) Individual expert definitions were pooled and reviewed by the panel lead (NM). In an iterative process, common themes were grouped, and several components of a definition were presented back to the panel for further voting and refinement until one definition emerged and was agreed upon by the panelists. The entire process was repeated for subsequently higher provider levels until definitions were created for all provider levels. We present these definitions here.

Four provider levels were decided as relevant for African OHEC systems: (i) first aid, (ii) basic life support, (iii) intermediate life support, and (iv) advanced life support. Tier-one providers deliver first aid, while tier-two providers deliver basic, intermediate, and advanced life support. The following terms were agreed on:

“First Aid” describes the basic assessments and simple interventions that can be performed by a bystander (or by the victim) with minimal or no medical equipment.

“Basic Life Support (BLS)” is a level of medical care provided primarily by tier-two providers (i.e. professional medical responders) that consists of non-invasive life-saving procedures including cardiopulmonary resuscitation (CPR) with an AED (automated external defibrillator), basic airway management, administration of oxygen (with or without a manual bag valve mask), control of bleeding, basic treatment of shock and poisoning, stabilisation of injuries and or wounds, and provision of more advanced first aid until the patient can be given more advanced care or be transported to an appropriate healthcare facility.

“Intermediate Life Support (ILS)” is a level of medical care that includes all BLS with additional advanced knowledge, skills, and administration of a limited selection of medications determined by local guidelines. Medications authorised to ILS providers may include those already prescribed to patients for managing acute medical events, including inhaled bronchodilators, oral non-narcotic analgesics, intramuscular or rectal diazepam, intramuscular epinephrine, intramuscular glucagon, intramuscular naloxone, and oral narcotics.

“Advanced Life Support (ALS)” is a level of care that includes all ILS and consists of invasive life-saving procedures including, but not limited to, advanced airway management and mechanical ventilation, intravenous (IV) or intrasosseous (IO) access, IV or IO fluid administration, emergency cardiovascular care (i.e. electrocardiogram (ECG) interpretation and management of life-threatening arrhythmias), and administration of a broad spectrum of medications according to predetermined local guidelines via the oral, inhaled, intranasal, intramuscular, IV or IO routes.

These expert-generated definitions have been ratified by AFEM. AFEM believes dissemination, adoption, and operationalisation of these definitions among African OHEC systems will improve care by facilitating more harmonious communication, collaboration, development, research, and sharing of experiences across systems and beyond borders.\(^5\)

In the second phase of this work, which commenced in mid-2015, the expert panel will delineate a clear scope of practice for each of the OHEC provider levels. Subsequently, educational curricula and content will be created and directly linked to each of the four levels of care and their associated scope of practice.

Conflicts of interest

The authors declare no conflicts of interest.

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References

1. Mould-Millman NK, Naidoo R, De Vries S, Stein C, Wallis LA. AFEM Consensus Conference, 2013. AFEM Out-of-Hospital Emergency Care Workgroup Consensus Paper: Advancing Out-of-Hospital Emergency Care in Africa-Advocacy and Development. Afr J Emerg Med. 2014;4(3):158–63.
2. Reynolds TA, Calvello EJ, Broccoli MC, Sawe HR, Mould-Millman NK, Teklu S, et al. AFEM consensus conference, summary: emergency care in Africa-where are we now? Afr J Emerg Med. 2013;3(3):158–63.
3. Mould-Millman NK, Dixon J, Sefa N, Yancey A, Hollong BG, Hagahmed M, et al. The state of EMS systems in Africa. Presentation at: African Conference on Emergency Medicine, 2014, 4-6 Nov 2014, Addis Ababa, Ethiopia.
4. Health Professions Council of South Africa (HPCS) Professional Board for Emergency Care. EMS definitions. 2015. Draft document provided by personal communication from Mr. Peter Fuhri.
5. Calvello E, Reynolds T, Hirshon JM, Buckley C, Moresky R, O’Neill J, et al. Emergency care in sub-Saharan Africa: results of a consensus conference. Afr J Emerg Med. 2013;3(1):42–8.