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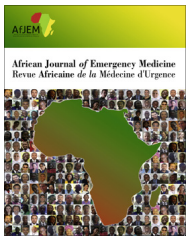

FEDERATION MATTERS

Access to out-of-hospital emergency care in Africa: Consensus conference recommendations

Accès aux soins d'urgence hors de l'hôpital en Afrique : recommandations de la Conférence de concertation

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Out-of-hospital emergency care (OHEC) should be accessible to all who require it. However, available data suggests that there are a number of barriers to such access in Africa, mainly centred around challenges in public knowledge, perception and appropriate utilisation of OHEC. Having reached consensus in 2013 on a two-tier system of African OHEC, the African Federation for Emergency Medicine (AFEM) OHEC Group sought to gain further consensus on the narrower subject of access to OHEC in Africa. The objective of this paper is to report the outputs and statements arising from the AFEM OHEC access consensus meeting held in Cape Town, South Africa in April 2015. The discussion was structured around six dimensions of access to care (i.e. awareness, availability, accessibility, accommodation, affordability and acceptability) and tackled both Tier-1 (community first responder) and Tier-2 (formal prehospital services and Emergency Medical Services) OHEC systems. In Tier-1 systems, the role of community involvement and support was emphasised, along with the importance of a first responder system acceptable to the community in which it is embedded in order to optimise access. In Tier-2 systems, the consensus group highlighted the primacy of a single toll-free emergency number, matching of Emergency Medical Services resource demand and availability through appropriate planning and the cost-free nature of Tier-2 emergency care, amongst other factors that impact accessibility. Much work is still needed in prioritising the steps and clarifying the tools and metrics that would enable the ideal of optimal access to OHEC in Africa.

Les soins d'urgence hors de l'hôpital (OHEC) devraient être accessibles à tous ceux qui en ont besoin. Cependant, les données disponibles suggèrent qu'il existe un certain nombre d'obstacles à cet accès en Afrique, qui sont principalement liés aux difficultés en termes de connaissances du public des OHEC, de leur opinion sur ces derniers ainsi que de l'utilisation des OHEC appropriée par le public. Un consensus ayant été atteint en 2013 sur un système des OHEC d'Afrique à deux niveaux, le Groupe des OHEC de la Fédération africaine pour la médecine d'urgence (AFEM) a cherché à obtenir un consensus plus large sur le sujet plus précis de l'accès aux OHEC en Afrique. L'objectif de cet article est de rapporter les résultats et les déclarations issus de la réunion de concertation sur l'accès aux OHEC de l'AFEM tenue à Cape Town en Afrique du Sud en avril 2015. La discussion était organisée selon six dimensions d'accès aux soins (à savoir la sensibilisation, la disponibilité, l'accessibilité, le logement, l'abordabilité et l'acceptabilité) et a abordé les deux systèmes d'OHEC de Niveau 1 (premier intervenant au sein de la communauté) et de Niveau 2 (services préhospitaliers formels et services médicaux d'urgence). Dans les sytèmes de Niveau 1, le rôle de la participation et du soutien communautaire a été souligné, ainsi que l'importance d'un système de premier intervenant acceptable pour la communauté dans laquelle il est intégré afin d'optimiser l'accès. Dans les systèmes de Niveau 2, le groupe de concertation a souligné la primauté d'un seul numéro d'urgence gratuit, le fait de faire correspondre la demande en ressources des Services médicaux d'urgence à la disponibilité grâce à une planification appropriée, et la gratuité des soins d'urgence de Niveau 2, entre autres facteurs ayant une incidence sur l'accessibilité. Un travail poussé est encore nécessaire en matière de classement des étapes par priorité et de clarification des outils et critères qui permettraient un accès idéal et optimal aux OHEC en Afrique.

Introduction

The adoption of World Health Assembly Resolution 60.22 established a landmark health care policy tool to improve emergency care access and availability globally with its call that "…a core set of trauma and emergency care services are accessible to all people who need them."[1] In November 2013, the African Federation for Emergency Medicine's (AFEM) Out-of-Hospital Emergency Care (OHEC) Committee, through a consensus process, described a two-tier system for African OHEC: Tier-1 being first responder and community-based, whilst Tier-2 described formal prehospital services and emergency medical services (EMS).[2]

Results of a recent Africa-wide EMS survey revealed that less than 9% of Africans are served by EMS, and the real number may be significantly less than 9% given multiple known barriers to accessing care.[3] Two studies have specifically assessed barriers amongst African populations that impede their access to prehospital emergency care and

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transportation. Mould-Millman et al. concluded that perceptions of public ambulance services in Accra, Ghana, were generally favourable, although utilisation was low.[4] The authors urged public health education as one intervention to help improve extremely low awareness of the toll-free medical emergency number and for education on the appropriate use of ambulances, whilst the transport and care capacity of local ambulance services were increased. These were felt to be priority pragmatic solutions to help minimise barriers to access and improve use of the EMS system. In Libreville, Gabon, investigators conducted a short oral interview of a small convenience sample of patients and visitors at a local emergency centre.[5] Qualitative results from this study indicated that misperceptions, lack of awareness, alternative forms of transport, and cost were all barriers to accessing prehospital resources. Broccoli et al., through focus group discussions in Zambia, identified that barriers to access included the absence of emergency transportation, healthcare provider deficiencies, a lack of community knowledge, and a poor national referral system, amongst other issues.[6]

The issue of appropriate access to OHEC is critical in matching demand and provision of valuable limited Tier-1 and Tier-2 resources: over-utilisation of these resources strains OHEC systems and thwarts their effectiveness, whilst under-utilisation results in wastage and cost-ineffectiveness.

In April 2015, AFEM held a third meeting in Cape Town, South Africa that included an OHEC consensus group. Following from the consensus statement in 2013, on advocacy and development of OHEC in Africa,[2] the 2015 meeting focused on the narrower subject of access to OHEC in Africa. This paper's objective was to describe the process and consensus statements on access to OHEC in Africa arising from this meeting.

Process

After a set of plenary presentations on the morning of the 2015 AFEM Consensus Conference, three smaller groups broke away to focus on specific consensus discussions. One of these was the OHEC Access group comprising of ten participants with expertise in African OHEC systems. The OHEC Access consensus group discussion began with a short presentation (CS). This presentation provided background to the subject of OHEC access and reviewed relevant terminology, the Penchansky and Thomas' conceptual frameworks of access to care,[7] and barriers to access from the scientific literature.

Prior to the Consensus Conference meeting, two of the authors (CS and NMM) constructed a table with columns derived from the five dimensions of Penchansky and Thomas' access model (Table 1). To this, a sixth dimension, *awareness* was added which was thought to be relevant to the discussion of access, and particularly in an African context. Awareness was defined as when and how members of a community access emergency care. Grid rows were a set of discussion foci based partly on the approach used in the 2013 AFEM Consensus Conference consisting of (i) principles of access (what should be in place to ensure adequate access), (ii) development of access (what needs to be done to ensure adequate access) and (iii) any other considerations relevant to access. This access grid was used to guide the consensus discussion that took place for the remainder of the day and its use was introduced and explained as the final part of the presentation.

As was the case with the 2013 AFEM Consensus Conference, discussions in the OHEC group aimed to produce recommendations that were applicable and could improve access to existing African OHEC systems that were cost-effective, implementable, measurable and capable of being scaled-up.

The agenda for the day was divided into access recommendations for Tier-1 (first-responder/community-based) and Tier-2 (EMS/prehospital care) OHEC systems. The access grid served as a framework for the consensus discussions and resultant majority-supported recommendations. All recommendations were briefly reviewed at the end of the day for final approval by all present at the general consensus conference.

Outputs

Consensus outputs are divided into those relating to Tier-1 and Tier-2 systems, and are presented for each tier under subheadings of the six access factors identified above.

Tier-1 (First-responder/Community-based) Systems

Awareness – A single toll-free emergency telephone number should be known by all members in the community. The working group agreed this was likely the most important principle of access related to awareness in Tier-1. In addition, there should be broader knowledge in the community concerning how and when to activate Tier-1 and Tier-2 resources. The key driver for public awareness of EMS access was seen as community education. It was suggested that conventional methods of public education about access to OHEC could be utilised, but also that communities themselves could be a source for ideas on how best to achieve public education in an effective way.

Availability – Every effort should be made to encourage community engagement and involvement in order to increase the number of available community responders. The working group acknowledges that calculating an adequate number of commu-

Table 1 Five dimensions of access to health care.[7]

Dimension	Description
Availability	The relationship of the volume and type of existing services (and resources) to the clients' volume and needs
Accessibility	The relationship between the location of supply of services (or resources) and the location of clients
Accommodation	The manner in which the services (or resources) are organised to meet the needs of clients and clients' perceptions of the appropriateness of the way services are organised
Affordability	The relationship between the cost and perceived value of services and the clients' ability to pay
Acceptability	The relationship of the clients' perceptions and attitudes towards the service (or resources) to the actual characteristics of the service, as well as to the perceptions and attitudes of providers towards certain clients

nity responders in a given community is difficult. However, community first responders should be visible, clearly identifiable, or known to community members. This may help reinforce the notion of their availability, and to further profile community response as a public initiative.

Accessibility – Community first responders should be embedded in the community and therefore accessible to members of the community. With smaller numbers of responders in larger populations, the distribution of responders may not be adequate given patterns of demand. The communities should address accessibility over time, as they will be aware of where and when first responders are most needed.

Accommodation – First responders should be available at all times and, as mentioned above, should be visible in the community. The organisation and configuration of community first responders will differ from setting to setting. The Tier-1 response model should be locally determined by each community and should consider temporal patterns around commuting and health seeking behaviours.

Affordability – Community first response emergency care must be freely available to anyone in a community requiring it. Training, equipment and other resources required to support community responders must be sustainable in the long term and resources should, as far as possible, be drawn from existing sources. Support for community first response from the EMS system, if available, is an important part of making this tier of emergency care sustainable.

Acceptability – The model for community first responder emergency care should be accepted by the community in which the responders are embedded. Careful consideration must be given to societal, cultural, religious, and linguistic norms and practices in making the provision of emergency care acceptable to a particular community. Care should also be taken to integrate community response with existing structures, for example, community healthcare worker and midwife programmes, in order to complement such initiatives rather than duplicate them or exclude them. It was emphasised again that community response programmes should primarily be led by the community and not Government.

Tier-2 (EMS/Prehospital care) systems

Awareness – The existence of a single toll-free emergency number was seen as the most critical factor in facilitating awareness of how to access the EMS system. This needs to be closely coupled with education of the public on how to use this service appropriately. The problem of abuse and misuse of emergency numbers was mentioned as a barrier to access because inappropriate users tie up Tier-2 resources. Possible solutions to this problem include targeted public education, initial call screening to filter out abusive or hoax emergency calls and legislation making abuse of emergency numbers unlawful and subject to some form of sanction. The important role of community leaders in promoting appropriate use and discouraging abuse of emergency numbers was emphasised.

In addition to primary response, African Tier-2 systems are well positioned and critical in conducting inter-facility transfers of patients to higher levels of care for definitive management. Inter-facility transfers are largely executed by healthcare providers; hence the awareness and availability of Tier-2 resources must be made known to facility-based providers. Facility providers and Tier-2 systems must develop a system of timely transfers that is acceptable to patients, facility providers, and the Tier-2 system.

Availability – Matching the availability of Tier-2 resources with the timing and nature of community prehospital emergency care needs is critical. In order to optimise availability of EMS resources it was considered essential to know what the emergency care needs of a given community are. Such knowledge can be derived partly from the community, but perhaps more importantly, from ongoing accurate reporting of EMS incidents that can be historically analysed. Careful consideration should also be given to the type of EMS provider relative to the emergency care needs of a community, meaning that EMS training and scopes of practice should be closely aligned with these needs. Inappropriate EMS activation, which delays and consumes Tier-2 resources, was identified as a barrier to resource availability and steps were suggested to minimise this by including better EMS call-taking procedures, education on the role of EMS in a community, and close involvement of community leaders in information dissemination.

Accessibility – Location and positioning of resources plays a critical role in determining adequate accessibility. Conversely, the negative impact of poor location decisions can have an impact on restricting access to available resources. Two major factors were highlighted in this respect. The first is that barriers to access in a given EMS system must be understood if they are to be effectively overcome. And the second is that a substantial challenge in EMS access is the location of patients in (usually, densely populated) areas where formal systems of geographic addressing are not in use. In solving the patient location problem, it was emphasised that in many countries existing technology (i.e. cellular networks) can be used very effectively for this purpose if encouraged and enabled to do so. The optimisation and opening up of existing technology to improve patient location and EMS accessibility should be a focal point of advocacy by EMS providers, community leaders, professional associations and other OHEC interest groups.

Other innovative solutions may be effective in facilitating the location of patients by EMS, with or without the use of existing technology as recommended above. In many places where locating patients is a challenge, EMS vehicles are directed to well-known landmarks where they rendezvous with patients or with a guide who can take the vehicle to the patient's location if the patient cannot be moved. Although workable, this approach may be improved by the establishment of predetermined and clearly marked rendezvous points well known to EMS providers and dispatch officers. It may also be possible to establish some kind of EMS communication at each rendezvous point. The involvement of community leaders and Tier-1 providers can enhance public knowledge of these rendezvous points and how to use them, thereby improving accessibility.

Accommodation – EMS should be available at all times, to all members of a community. Having EMS personnel available on a 24-h basis may be particularly challenging in less well developed or smaller systems, however, it is recommended that an attempt be made to offer some service even if it is on a standby basis. Community liaising is an important aspect of ensuring that expectations of service delivery are in keeping with what the system can actually deliver. The feedback of community members who have interacted with the EMS should be proactively sought in order to ensure that that ser-

vice provision is perceived as being appropriate, and if not, to identify areas for improvement and alignment.

Affordability – EMS should be available to all members of a community at no cost, for emergency medical purposes. The ability to pay should never be a factor in deciding on the access of any individual or community to quality EMS, for emergency medical needs. However, the provision of quality EMS is costly, and funding such systems is always challenging. This burden should never be placed on users of the system, but is rather a governmental responsibility that should be provided for as part of a budgeting process. Consideration should be given to private–public partnerships, where appropriate, as a potentially sustainable funding strategy. Given the competition for funding within government processes, the existence of an efficient EMS that is spoken of highly by the community it serves, and a system meeting performance metrics, makes an easy case for appropriate allocation. An EMS system that has a reputation for being wasteful, inefficient and out of alignment with the needs of a community is difficult to defend from a budgeting perspective. Consequently, it should always be remembered that affordability is closely associated with all of the other access factors and does not exist as a consideration on its own.

Acceptability – Sensitivity to the community, and what it considers acceptable in the provision of health care, is an important barrier to consider and proactively minimise. A number of psychosocial, cultural, political, religious, and linguistic factors, some of which have been touched on above, were considered to be important in positing EMS to be acceptable to the community it serves. Sensitisation and training is an important opportunity to ensure that EMS personnel understand and are sensitive to a community's needs, and also that personnel understand and embody professionalism. Building and maintaining links between EMS and other parts of the health care system, including traditional health care providers in a community, is also important in reinforcing the acceptability of EMS.

Conclusion

Access to emergency care is a critical principle in building sustainable and resilient health systems the world over. This realisation is made all the more challenging within the austere environments that characterise many African countries.

Minimising barriers to accessing Tier-1 and Tier-2 systems by the public is critical to ensuring appropriate, timely, equitable use of these limited, but valuable, resources. In this consensus process, we applied Penchansky and Thomas' framework of domains of health access to exploring likely challenges and proposing pragmatic solutions relevant to Tier-1 and 2 systems in Africa. Special mention was also made about the importance of timely access by facility-based healthcare workers to Tier-2 resources to assist with conducting acute or emergency inter-facility transfers.

The above consensus process has attempted to identify the key factors that must be considered when attempting to develop and strengthen out-of-hospital emergency care systems. Much work is still needed in prioritising the steps and clarifying the tools and metrics that would enable such a process.

Conflicts of interest

The authors report no conflicts of interest.

Authors' contributions

CS and NMM prepared the Consensus Conference meeting material with review and comment from SD and LW, CS and SD facilitated and moderated discussion at the meeting, CS drafted the manuscript and all authors contributed significantly to critical review and revision of the manuscript.

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