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## EDITORIAL

# South African pre-hospital guidelines: Report on progress and way forward



### The AFEM Pre-hospital clinical practice guideline project

In a previous editorial<sup>1</sup> the authors introduced the African Federation for Emergency Medicine (AFEM) pre-hospital clinical practice guideline (CPG) project initiated in 2015 on behalf of the Health Professions Council of South Africa Professional Board of Emergency Care (HPCSA PBEC). To date, aspects of the guideline development project were presented and discussed at the International Emergency Medicine Conference (ICEM) in early 2016 and the project has subsequently been completed and submitted to the HPCSA PBEC in June 2016 for review and eventually dissemination and implementation. The guideline represents the first evidence-based CPG for the emergency care profession in Africa. The guideline project aimed to review and update the existing protocols for emergency care providers and create an evidence-based CPG which: (i) provides an evidence base for emergency care practice contextualised to the South African setting (ii) is patient-centred, realistic and enhances the continuation of care throughout the emergency system (iii) is aligned to current local and international best practice and (iv) provide guidance to both current practitioners and those envisioned by the draft National Emergency Care Education and Training (NECET) policy.

This CPG was developed under the direction of AFEM, collaborating with the Divisions of Emergency Medicine at the University of Cape Town (UCT) and Stellenbosch University (SU), together with the Department of Emergency Medical Sciences at Cape Peninsula University of Technology (CPUT) and the Centre for Evidence-based Health Care, Stellenbosch University. The guideline development project followed a systematic guideline development process with the input of a core guideline panel, methodological experts and an advisory board consisting of industry stakeholders and experts. The key principle, advocated in guideline development literature for low-to-middle income countries, was not to create *de novo* clinical practice guidelines but to either adopt, adapt or contextualise current high quality CPGs or adapt evidence from existing systematic reviews<sup>2–5</sup> as previously outlined.<sup>1</sup> The development process involved setting key priority areas, comprehensively searching for existing pre-hospital relevant CPGs, screening

over 5000 potentially-relevant CPGs, guideline critical appraisal (using the AGREE II tool),<sup>6</sup> assessing and synthesising more than 270 included pre-hospital CPGs and incorporating industry and advisory board feedback. This culminated in a pre-hospital CPG with over 1000 recommendations for South African emergency care clinical practice aligned to local contextual factors and providers' scope of practice.

At this stage the AFEM CPGs is yet to be published pending internal review and industry wide stakeholder engagement by the PBEC. Despite the profession's anticipation of receiving the updated guidelines (as the current protocols were last reviewed in 2006 and a few in 2009), patience is required while the challenge of digesting and eventually implementing these guidelines in practice takes place.

### Strengthening guideline development in Africa

The AFEM CPGs represent a transition from opinion-based and skills driven practice to evidence-informed clinical practice which can create the foundational framework for resource-constrained guideline development teams, specifically in Africa and other low-to-middle income countries. Evidence based health care in Africa has grown over the last two decades, spurred by initiatives promoting the conduct of primary and secondary research, and its role cannot be underestimated in combatting the high burden of disease in Africa.<sup>4</sup> Furthermore, there are promising developments in clinical practice guideline development and evaluation across Africa creating opportunity for collaboration and knowledge sharing.<sup>7–12</sup> For example, the Paediatric Association of Kenya made clear recommendations regarding stopping bolus fluid therapy in children with varied degrees of circulatory impairment based on the totality of the evidence, ahead of even the World Health Organisation (WHO) recommendations.<sup>12</sup> In Botswana, Kestler and co-authors, developed local emergency sepsis care algorithms based on components from the Surviving Sepsis Campaign and incorporating local policy and available hospital resources. They showcase a useful end-user algorithm contextually appropriate and implementable to local practice.<sup>7</sup> Kredo and co-authors assessed 30 regional guidelines from 13 countries and through the AGREE II tool found quality gaps and variable alignment with best evidence,<sup>10</sup> similar to in South African primary healthcare guidelines.<sup>13</sup>

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While it is clear that there is steady growth in guideline development in Africa, emergency care guideline progress has been neglected to date. This is supported as preliminary results from the AFEM guideline project indicate guideline quality remains poor even from guidelines originating from developed countries. To accelerate the development, availability and applicability of emergency care guidelines, regional guideline teams should use existing methods and resources developed by the AFEM CPG project adapted to local context needs, instead of *de novo* guideline development. The AFEM CPG project team aim to produce a series of papers to develop and strengthen emergency care guideline development in Africa and similar low-to-middle income countries.

### Implementation science – time for change

The WHO acknowledges that one of the greatest challenges in global health is how to effectively transition evidence (such as guidelines) into the real world.<sup>14</sup> With the forthcoming guidelines for emergency care the next challenge of guideline dissemination and implementation has begun. This task, as important as the guideline development process itself, is often misunderstood and taken for granted by clinicians expecting instant output from policymakers and stakeholders. For South Africa, the effective dissemination and implementation of the AFEM CPG recommendations could take years, and is dependent on various factors including the system's ability to accept change (change behaviour)<sup>15</sup> and the availability and generation of additional funding, local implementation evidence and human resources to enable the delivery. Various dissemination and implementation strategies have been reviewed and tested over the years; of which we provide a brief summary:

#### *Ineffective and variably effective implementation strategies*

Ineffective forms of guideline dissemination include passive educational approaches such as lectures, continuing medical education and publishing guidelines. These may raise awareness, but are generally ineffective in changing provider behaviour.<sup>16,17</sup> Variably effective strategies include audit and feedback and using local opinion leaders.<sup>18,19</sup> Passive dissemination is valuable in creating awareness and a good first step in 'getting information out there', however the desired strategy should be effective implementation that changes health outcomes.

#### *Effective implementation strategies*

Multifaceted interventions, based on behaviour change and assessments of local barriers are more likely to be effective than single interventions<sup>15</sup> and must include interactive educational interventions. Unfortunately, little to no evidence exists around local barriers to guideline implementation and end-user guidance needs in emergency care. Disseminating and/or implementing on a recommendation-by-recommendation basis rather than an entire guideline is advised,<sup>20</sup> and this could be particularly useful for the new AFEM guideline (some recommendations may not be implemented currently due to required changes in pre-hospital education and industry capacity).

Disseminating and implementing a national clinical practice guideline is an enormous task and will require careful planning, research, possible revision of local and national health care policies and regulations, and most importantly support from industry before being successful. This in particular requires a national industry wide discourse including all industry stakeholders, educational institutions, the private sector, public sector, healthcare policy makers and the professional board of emergency care. The objectives of such discussion should include engagement and industry input around the systematic system wide implementation and sustainability of the proposed guidelines.

### Conclusion

The first evidence based emergency care clinical practice guidelines in Africa have been developed and can create a foundational framework for resource-constrained guideline development teams. Although these guidelines have filled a void in providing context appropriate clinical guidance to pre-hospital providers, the successful dissemination and implementation may prove to be the biggest challenge yet. Active involvement and support from the pre-hospital profession as a whole, the private and public sector, educational institutions and every provider has never been so important.

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