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## EDITORIAL

# Pre-hospital clinical practice guidelines – Where are we now?



### Introduction

Clinical practice guidelines (CPGs) have been a cornerstone of quality medical practice for over 30 years. CPGs have previously been defined as systematically-developed evidence-based recommendations for patients and practitioner decisions.<sup>1</sup> The definition was updated in 2011 to emphasise the essential methodological component: “Clinical guidelines are statements that include recommendations intended to optimise patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options”.<sup>2</sup> CPGs are thus documents that should be based on synthesis of the best available evidence, presented as clear and unambiguous recommendations for managers, policy-makers and clinicians.

### Developing clinical practice guidelines

Historically, clinical practice guidelines (CPGs) were mostly written by expert groups or professional societies, and were built on opinion, or variable and often selective reference to evidence.<sup>3,4</sup> Today however, methodologists form a key component of CPG writing teams.<sup>5</sup> CPG development, especially *de novo* (new) development, can be a long and expensive endeavour, and often out of reach to guideline teams with limited funding or who are not connected to universities or international CPG agencies (eg. Guidelines International Network). Kredo et al.<sup>6</sup> argues that there seems little merit in developing new CPGs (unless there is a true gap in guidance) when there is a wealth of freely accessible, good-quality CPGs available that can be adopted directly, or contextualised and/or adapted to local needs. There are a variety of tools to aid CPG writing teams in finding and appraising the quality of existing CPGs, thus making the decision around which CPGs to use easier and transparent.<sup>7,8</sup> It appears that adopting, contextualising or adapting CPGs are emerging methodologies that underpin implementation by identifying and addressing local barriers in the CPG writing process. Thus their use could be critical to developing readily-implementable emergency care CPGs in South Africa, and other low-to-mid-

dle income countries where there are resource constraints and scarce skills.<sup>9,10</sup>

### The South African guideline challenge and next steps

The challenge is to produce and implement current best evidence-based CPGs for pre-hospital emergency care in South Africa. In 2006 and 2009, the latest versions of pre-hospital protocols (documents providing clinical practice instructions) were published by the Health Professions Council of South Africa (HPCSA), and endorsed by the Resuscitation Council of Southern Africa (RCSA) and the Emergency Medicine Society of South Africa (EMSSA). The 2006 version spoke to basic to advanced providers, while the 2009 protocol addressed emergency care practitioners. At the time of writing these protocols, there was minimal local or international guidance on processes and methods by which to produce protocols based on the best available evidence. It is unclear what evidence underpinned the 2006 and 2009 protocols (relative to today's CPG writing requirements<sup>11–13</sup>), as the protocols appear based largely on expert opinion. However, in the last decade, the volume and quality of research evidence regarding effective pre-hospital care has increased, but the protocols have not been updated. It is time to revisit current CPG writing processes, as well as the evidence base for South African pre-hospital emergency care protocols, to ensure that CPGs for pre-hospital care for South Africans and Africa meet current best practice international standards and provide access to the best current evidence.

Besides the risk of not applying current best evidence in treatment decisions, there are other ramifications of using outdated protocols for pre-hospital emergency care in South Africa. These include the slow transformation of qualification bands, difficulties in dealing strategically with increasing pressures on out of hospital services from the ever emerging burden of disease (specifically injury, accounting for more deaths than HIV/AIDS, TB and malaria combined)<sup>14–16</sup> and the potential loss of skilled practitioners to other countries where practices and opportunities are perceived to be better.<sup>17,18</sup> To address the need to update current pre-hospital emergency practices with better evidence, a number of exciting steps are being taken in South Africa:

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- (1) In 2013, initiated by the African Federation for Emergency Medicine (AFEM), an out-of-hospital emergency care consensus paper was published, establishing standard terminology, components of emergency care and statements to facilitate advocacy and development of emergency care systems for Africa.<sup>19</sup> Christopher et al.<sup>20</sup> have progressed this work and consequently set the agenda for the emergency care continuum in the Southern African region. The International Emergency Conference in Botswana adopted several research imperatives for health and emergency systems and recommended “the enhancement of evidence-informed guidelines across the spectrum of emergency medicine theory, praxis, practice and policy” (p 155). Considering the date of the current out-of-hospital emergency care protocols used in South Africa, this statement is long overdue and offers real incentives to improve practices.
- (2) The Health Profession Council of South Africa Professional Board of Emergency Care (HPCSA PBEC) awarded a bid to revise the current emergency care protocols to the African Federation for Emergency Medicine, collaborating with the Centre for Evidence-based Health Care (Stellenbosch University) and the Department of Emergency Medical Sciences (Cape Peninsula University of Technology) in late 2015. This provides the opportunity to improve and establish best-practice methodological standards for producing and implementing emergency care guidance in Africa.
- (3) The Emergency Care Society of South Africa (ECSSA) released a position statement in late 2015 regarding the revision of the South African emergency care protocols.<sup>21</sup> The position statement outlines the differences between protocols, end-user guidance documents and CPGs, as there is currently little agreement about these definitions.<sup>22</sup> This position statement has been subsequently supported by the definitions proposed by Kredo et al.<sup>6</sup> defining a ‘protocol’ related to health as a manual “describing rules or instructions about how to do a particular process explicitly, or without error” (p 2). To be able to guide best practice however, protocols (or other products) need to be derived from a parent CPG, which presents a high quality, comprehensive, evidence-based resource. In many instances a CPG is a large document of several hundred pages, which contains methodologies, evidence evaluation and summary tables, and references. For emergency care workers, a protocol might be coupled with easily accessed handbooks, smartphone apps or algorithms as ways of implementing recommendations from the parent CPGs. Thus they are *implementation tools* derived from the parent evidence-based CPG. These are essential given the nature of pre-hospital emergency care, as no paramedic (or other clinician) will walk around with an entire CPG in their back pocket!

### African and South African emergency care guideline needs

To aspire to provide best practice, African emergency care requires end-user guidance documents, based on CPGs which are: (i) derived from methodologically-sound interrogation of

current international best practice (ii) patient centred and appropriately applies the evidence along the continuum of care, from callout to handover (iii) aligned to the requirements of current and future educational bands (iv) include clinical recommendations contextualised by practice/context points and other service delivery prompts and (v) apply patient pathway recommendations contextualised and adapted to low-to-middle income settings, in ways that reduce health system inefficiency and unnecessary costs, and celebrate African innovation.<sup>23</sup>

The recommendations should address the needs and capacities of the majority of emergency care providers, and be focused around priority areas determined by the health and organisational needs of different emergency care systems in Africa. This is challenging as infrastructure of out-of-hospital care in Africa varies. For example, countries such as the Democratic Republic of Congo and Ghana has no functioning formal national or provincial pre-hospital care, and its priority areas would be very different than more established emergency care infrastructures in other low-to-middle income and African countries with more established systems.<sup>24–26</sup>

Addressing the needs of pre-hospital emergency workers in South Africa provides the opportunity to implement evidence into practice in novel ways, which align with specific work environments and end-user needs. Guideline implementation is an entire field on its own but is as important as the guideline development process itself. In order for emergency care guidelines to be implemented effectively, specific care is required to produce acceptable tools (end-user documents) for paramedics, in a way that includes paramedics in shared decision-making processes.<sup>6</sup> This will ensure that the end-user documents will be readily implementable across variable working conditions. Electronic forms of end-user content is also becoming more popular, as mobile apps such as TOMPSA<sup>27</sup> emerge. These could provide alternative implementation tools as internet access across Africa improves.

To improve the quality of evidence available to emergency-care workers, and the production of innovative end-user tools, an independent African CPG writing panel should be established, comprised of methodologists and content experts, to biannually review the available evidence of current key priority areas. This could be similar to the systematic review update process employed by the National Institute for Health and Care Excellence.<sup>28</sup>

CPG writing and implementation activities are only as useful as the system’s ability to absorb change, and measure its impact. Monitoring and evaluation provides important feedback to CPG panels, to underpin future updates and changes. Establishing a responsive monitoring and feedback system in pre-hospital emergency care is the next challenge.

### Conclusion

The production of internationally-respected parent CPGs, and relevant readily-implementable end-user documents for South African pre-hospital emergency care has the potential to energise the profession and potentially increase its impact in Africa. Its success is dependent on the synergistic collaboration and involvement of all people whose views and skills are essential (methodologists, researchers, educators, patients and most importantly, paramedics).

### Conflict of interest

The author declares no conflict of interest. The views expressed in opinion pieces do not necessarily reflect the views of the African Journal of Emergency Medicine or the African Federation for Emergency Medicine and are solely the opinion of the author.

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