

The emergence of emergency care

by Belinda Lawton

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Emergency care has an image problem: in the context of low and middle income countries (LMICs), it is often characterised as being too expensive, too complex and too much of a luxury to gain much traction.

While in developed countries we take emergency care – including broad community first aid training, well-trained medical staff, transport services to reach hospital and functioning triage systems – for granted, many LMICs don't even have a **dedicated emergency department in hospitals**, with potential patients waiting for treatment in the order in which they arrived, rather than being **triaged** [subscription required].

There are three key events now driving change in the health world that make international emergency care worth reconsidering: the rise of the **global surgery agenda**; the **strengthening of data from LMICs**; and the increased rigour and volume of the work emerging from across the developing world, spearheaded by organisations including the **African Federation for Emergency Medicine (AFEM)**.

First, *The Lancet's* endorsement earlier this year of global surgery – defined as an area of medicine that 'seeks to improve health outcomes and achieve health equity for all people who need surgical and anesthesia care, with a special emphasis on underserved populations and populations in crisis' – as a critical part of health care is changing the health policy agenda. There has been significant work done to demonstrate the **cost-effectiveness** of global surgery and **the need for its implementation**. These recommendations are supported in the third edition of *Disease Control Priorities* (DCP), with the first volume, *Essential Surgery*, released in March this year. Both pushes have benefited from the direct endorsement of **Dr Paul Farmer** and a roll-call of other prominent global health voices (see for example the author list in **this paper**). Given the academic and professional might behind global surgery, it's a fair bet that it will shape the agenda in the next decade.

However, until now the surgical push has lacked a clear explanation of how these surgical cases can be identified and prioritised. And that is where international emergency care needs to be brought into the picture. Much of the burden of disease

that would be impacted by the global surgery agenda relates to acute conditions: obstructed labour; hernia; appendicitis; fractures; injury trauma. To identify those cases, health systems need first responders who recognise the need for care, transport to hospital, efficient triage and emergency care staff who can provide appropriate pre-surgical care. Functional operating theatres, with medical supplies and doctors able to perform relatively uncomplicated surgical interventions, are useless if the patient doesn't make it as far as the theatre.

The second key event has been the work driven by [Murray, Lopez](#) and others to develop the Global Burden of Disease (GBD) data sets. [Starting in 1990](#), the GBD reports didn't just improve the quality of the data on the state of health across the globe, they also addressed the long-ignored implications of disability on the health of populations. Since then, further refinement of the data has clarified the hitherto opaque issue of the impact of injury and other acute conditions on population health. In examining the disability-adjusted life years (DALYs) data, the need for emergency care becomes apparent. While there is a kaleidoscope of symptoms that people can experience, [emergency care teams prioritise six as frequently and quickly leading to death](#) [pdf] if left untreated. Those six – shock, respiratory failure, dangerous fever, severe pain, trauma and altered mental status – correspond with the leading causes of death and disability identified in the GBD reports, including lower respiratory infections, perinatal conditions, and road trauma.

The third event is arguably going to be the most significant for the future of emergency care in LMICs: the increasing rigour and volume of research on emergency care in resource-poor contexts. Strong leadership and coordination from Africa has produced not just academic material (including outstanding papers from [Wallis](#) and [Reynolds](#)) but practical resources for training and practice, including the [AFEM Handbook of Acute and Emergency Care](#).

This research is demonstrating what can be achieved with relatively small investments. As far back as 2002, Razzak and Kellermann [advocated for basic emergency care in developing countries](#) in the *Bulletin of the World Health Organization*. Yet the misconception persists that emergency care is a bells-and-whistles approach requiring significant capital and infrastructure investment. On the contrary, while there is still an urgent need for further research relating to the implementation and cost-effectiveness of emergency care, it has been estimated that [35 to 46 per cent of morbidity and mortality in LMICs](#) could be addressed through integrated pre-hospital and in-hospital emergency systems.

Another important factor to note about emergency care is its integrated nature. It is not disease-specific and it serves to strengthen health care more broadly, rather than setting up alternate systems and structures.

The cost-effectiveness argument, while logical, has been difficult to justify until recently because of the research gap. While we are starting to see more evidence of the cost-effectiveness of emergency care – see [here](#), [here](#) [pdf] and [here](#) for examples – more work needs to be done in this area. There is the potential to research existing training programs in LMICs, [such as in Myanmar](#), to evaluate their impact.

Recently, hundreds of the world's top emergency physicians, nurses and paramedics gathered in Melbourne for the [International Emergency Care Conference](#), organised by the [Australasian College for Emergency Medicine](#) (ACEM). Over two days, presenters highlighted their experiences with emergency medicine in LMICs: working in it, teaching it and adapting it to contexts as diverse as Vanuatu, PNG, Myanmar, Iraq and Nepal.

What the conference demonstrated was that emergency specialists have a clear idea of how the specialty can be adapted to LMIC contexts and that much of the criticism of emergency care has missed the point. None of the presenters described a vision of a trauma centre like those we see in high income countries. All the presenters had practical field experience and were frank about the challenges and opportunities. They adeptly critiqued the view that emergency medicine is about expensive CT, MRI and fully kitted-out ambulances, countering with the benefits of triaging cases and establishing context-appropriate transport – be that donkeys or adapted bicycles.

International emergency care may well be on the cusp of setting some new directions in health policy and practice in LMICs. For those interested in health policy, this is an emerging area worth watching.

Belinda Lawton is a PhD candidate at the Crawford School of Public Policy at The Australian National University.

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Author/s:

Belinda Lawton

Belinda Lawton is a PhD candidate at Crawford School of Public Policy researching not-for-profit, non-government hospitals and clinics in fragile countries in Asia. Belinda is a communications specialist who has worked with several health-related NGOs in Timor-Leste, Bangladesh and Thailand.

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