

# Surgery and sedation is not safe in Africa

The Lancet Commission on Global Surgery (LCoGS) has established universal definitions for safe surgery. These include definitions for timely access to essential surgery, the number of specialist providers, an adequate surgical volume, tracking of perioperative mortality, and protection against impoverishing expenditure.<sup>1</sup> The LCoGS data highlights that in Africa we do not have enough specialist surgical and anaesthesia providers nor do we provide an adequate surgical volume to meet the surgical needs of our population.<sup>1</sup> The result is that surgery and sedation are not safe in Africa.

South Africa is relatively well off when compared to other African countries. It is classified as a middle-Human Development Index (HDI) country, compared to a large proportion of African countries which are classified as low-HDI countries. Yet, even in South Africa, our patients present late for surgery, and this late presentation is a leading determinant of postoperative surgical mortality.<sup>2</sup> Our patients may present late to surgery partly because our resources are inadequate, and partly due to difficulty in accessing surgery through the entire surgical chain.<sup>1</sup> Therefore, one of the top 10 national perioperative research priorities for South Africa is to understand surgical outcomes at a district hospital level.<sup>3</sup> This may help us understand how we can ensure that patients get earlier surgical care at an appropriate surgical facility.

So how can we contribute to improving outcomes across South Africa, and across Africa? It is important to provide an opportunity to publish peer-reviewed research which highlights drivers of morbidity in middle and low-income countries. Only then will we be able to respond appropriately to these needs. This edition of SAJAA focuses on morbidity in Africa. Currently, the contribution from Africa to the peer-reviewed world academic literature is small.<sup>7</sup> This has negative implications for clinical care in middle and low-HDI countries, as the majority of our clinical practice will be determined by research and publications from high-HDI countries, which do not always reflect the clinical problems faced in Africa. There is a realisation now that 'one size does not fit all', especially when considering clinical management guidelines in middle and low-HDI countries, with suggested local adaptations to management guidelines been proposed.<sup>8</sup> If we want to improve outcomes in Africa, we need to understand what drives morbidity in Africa, so that we can appropriately adapt management guidelines to suit the African context.

This edition of SAJAA illustrates a number of issues which contribute to mortality and morbidity in Africa. Firstly, because we do not have enough anaesthesia providers, we have the situation where radiology residents provide sedation in Nigeria, yet their training and skills are demonstrated to be wholly insufficient to conduct this practice safely.<sup>9</sup> Surely, safe practice guidelines need to be established to prevent morbidity in this environment. Furthermore, in middle and low-HDI countries, access to surgery is compromised and unacceptably low,<sup>1,4</sup> yet, this is the very environment in which patients are more likely to have their surgery cancelled when finally reaching a surgical facility, when compared with high-HDI countries.<sup>10</sup> The paper by Lankoande and colleagues suggests that a dedicated preoperative clinic is probably more important in Africa than it is in a high-income country, if we are going to decrease unnecessary surgical cancellations and increase the number of patients who can get to surgery. It is likely that the focus of this type of preoperative clinic will be broader, and would include systems management, when compared to HDI-country preoperative clinics which are more patient-centric. Finally, the severity of disease that some centres have to manage with limited resources<sup>11</sup> suggests that simple protocols to guide local management may improve patient outcomes. An example of the power of a simple checklist or algorithms is seen with the surgical checklist which has been shown to improve survival.<sup>12</sup> The uptake of the surgical checklist in practice is unfortunately

significantly lower in the middle and low-HDI countries,<sup>4</sup> at only 55.7% and 32.1% respectively at the surgical sites in the Global Surgery study.<sup>4</sup> This is compared to over 90% in high-HDI countries.<sup>4</sup> Importantly, sites that do not use the checklist in this study had an independently associated higher postoperative mortality.<sup>4</sup> One of the consequences of the morbidities associated with failure to use the checklist is reported in the case study by Jacobs and colleagues.<sup>13</sup> Probably, of more importance however, is that in a continent which is underserved and under-resourced, one way to improve outcomes would be to embrace more locally adapted protocolised management algorithms and checklists. This would ensure support for surgical and anaesthetic providers who find themselves in a difficult, resource limited environment trying to provide safe clinical care.

To understand where we should focus our attention to provide these cognitive tools, it is necessary to understand what drives morbidity in Africa. To this end, SAJAA is proud to provide a peer-reviewed platform to publish papers which help us understand morbidity in Africa.

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