

# Challenging barriers to surgical access in lower and middle-income countries

The Lancet Commission on Global Surgery suggests that five billion people do not have access to safe, affordable surgical and anaesthesia care when needed.<sup>1</sup> This is most evident in lower- and middle-income countries where 9 out of 10 people do not have access to basic surgical care.<sup>1</sup>

Sub-Saharan Africa is one area singled out as having one of the greatest unmet surgical needs globally.<sup>2</sup> Barriers to surgical access lead to delayed presentation of disease. As a consequence, disease progression increases the burden of disease. Elective surgery becomes semi-urgent and increases perioperative risk for adverse outcomes. This is well documented in the South African Surgical Outcomes Study (SASOS),<sup>3</sup> and in the African Surgical Outcomes Study (ASOS),<sup>4</sup> where elective surgery constitutes less than 50% of all surgeries, in comparison to Europe where elective surgery makes up 75% of all surgeries.<sup>5</sup>

Barriers to surgical access are complex and multifactorial, and have been described by the 'Three Delays' framework.<sup>6</sup> Determinants of safe and timely surgery centre around accessibility and availability. Delay in seeking care may be due to financial, geographic, cultural and educational constraints (First Delay). Once the decision to seek care is made, patients experience a delay in getting to hospital (Second Delay); predominantly governed by transport difficulties and scarcity of available surgical facilities. Finally, a patient arriving at an appropriate healthcare facility is not guaranteed the needed surgery (Third Delay). This Third Delay is highlighted in this edition of the Journal by Lankoande et al. who showed that elective day of surgery cancellation rates in an 800-bed tertiary hospital in Burkina Faso were in excess of 20%, of which 90% were deemed avoidable by the authors.<sup>7</sup>

Day of surgery cancellations have implications in both high- and low-income countries. They are associated with a loss of revenue and waste of resources, as well as significant psychological, social and financial implications for patients and their families. Furthermore, they result in a significant loss of training opportunities for surgical trainees.<sup>8</sup> Additionally in lower-income countries where direct remuneration per procedure may not occur, same day surgical cancellations undermine the cost-effectiveness of the healthcare system; where fewer cases are performed for the same fixed human resource cost, resulting in a higher average cost per operation.

Of greater concern, is that same day surgical cancellation has the potential to increase the burden of disease. In Lankoande and colleagues' study, 60% of the cancelled procedures were rescheduled and the average waiting time for these patients was almost three weeks. Additionally, 10% of cases were cancelled more than once.<sup>7</sup> These delays may have a significant effect on outcome. Closer scrutiny is also needed to explain why 40% of the cancellations were indefinitely postponed. A possible reason, which needs to be explored, is whether disease progression resulted in advanced pathology obviating the need for further surgery.

Rescheduling of cases has another knock-on effect, which is not limited to the individual patient but rather to the community, where waiting-

list times increase, and others are therefore denied timely surgical access. Surgical disease progression may therefore also compromise the outcomes of these patients.

Published cancellation rates vary significantly, anything from 2% to 30%, hence it is important to benchmark against loco-regionally and internationally accepted standards.<sup>8-14</sup> Observationally, it appears that cancellation rates tend to be higher in lower and middle-income countries as compared to higher-income countries. Cancellation rates reflect one component of efficiency. High efficiency units which are considered as high performance hospitals aim for cancellation rates less than 5%; and poor performance is deemed as cancellation rates > 10%.<sup>15</sup> Same day surgery cancellation rate is seen as a quality assurance measure, which can be targeted to improve cost-effective healthcare delivery. Encouragingly, these high efficiency and performance benchmarks are potentially achievable in Burkina Faso, where if the factors assessed as 'avoidable cancellations' were addressed, the cancellation rate would fall below 5%.<sup>7</sup>

Root cause analysis of inefficient utilisation of a scarce resource has to start with data collection of practices to firstly identify what the loco-regional standard is. Secondly and more importantly, we need to implement intervention strategies to make lasting improvements. Collaborative research on the African continent, such as the recently undertaken African Surgical Outcomes Study, has highlighted that despite enormous challenges, meaningful collaboration is possible.<sup>4</sup> This collaborative group has the capacity to identify barriers and point to strategies that may require healthcare practitioners, managers, government and non-governmental bodies with context-specific insight to engage in a more accountable practice.

Surgical access is not only a human right needed to decrease pain and suffering and promote dignity, but is also fundamental to enhance social and economic empowerment.

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