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The COVID-19 pandemic: an opportunity to improve perioperative care in Africa

With the rapid surge of the COVID-19 pandemic, Africa has never had a greater need to improve perioperative health outcomes, reduce hospital stay and ICU use. Perioperative healthcare in Africa, as in many parts of the world, lacks standardisation, is seldom evidence based and is surgeon rather than patient centric. Perioperative outcomes in Africa and other low- and middle-income countries (LMIC) is suboptimal when compared to high-income countries (HIC). The results of the International Surgical Outcomes Study (ISOS) demonstrated that patients in LMICs had poorer outcomes despite a lower baseline risk.[1] In the African Surgical Outcomes Study (ASOS) the mortality after surgery is twice the global average despite patients being at lower risk when compared to similar international cohorts. The majority (94%) of these deaths occurred within the first twenty-four hours after surgery, most likely the result of failure to rescue as a consequence of inadequate perioperative care.[2] The data on maternal and neonatal outcomes after caesarean section demonstrated that perinatal maternal mortality is fifty times higher and neonatal mortality is twice that of HICs.[3]

The necessary cancellation of elective surgery during the COVID-19 pandemic will add significantly to the huge unmet surgical need in Africa. The last five years have seen increased global efforts to improve access to safe and affordable surgical and anaesthetic care.4 However, there has been little discussion on optimising perioperative care, developing tools to measure and monitor patient outcomes, and on shared solutions to teaching, training and clinically relevant research.

The Enhanced Recovery After Surgery program (ERAS) has been established to improve perioperative care. It is a patient centred, evidenced based, multidisciplinary team approach with tools to measure and monitor patient outcomes, and compliance to the guidelines.[5] A meta-analysis of randomised control trials has demonstrated a significant reduction in length of stay (20–30%), complications (20–40%) and costs (10–20%).[6] These results have been achieved in HICs. There are two ERAS centres in Africa with over 700 patients, and the results are comparable to that of HICs (unpublished). If programmes like these can be modified to the contextual challenges of poor access to healthcare, the lack of resources and infrastructure, the high prevalence of malnutrition, obesity, anaemia and HIV in Africa, they could provide an excellent platform to improve perioperative care.

The World Health Organization Surgical Safety checklist, when used consistently and regularly, has been shown to significantly reduce perioperative morbidity and mortality.[7] The checklist, although, a simple, relatively easy intervention to implement is still not routinely practice in many parts of Africa. In the ASOS study the checklist was used in just 57% of procedures. As the COVID-19 pandemic increases, asymptomatic patients who are carriers will increasingly enter the healthcare system and pose a further risk of transmission to surgical healthcare workers. Additional elements will need to be added to the checklist, these include strict adherence to hand washing, social distancing, use of personal protective equipment, reduction of staff and adequate decontamination between cases. The establishment of dedicated perioperative teams with skills in implementation and change management may well facilitate a broader uptake of this important tool.

Mobile phone utilisation is high in Africa and internet access continues to improve making this potentially an invaluable tool in healthcare. The number of mobile internet subscribers in sub-Saharan Africa has quadrupled in the last ten years with over 400 million users today. The use of cellular phone and wireless technologies (mHealth) provides Africa with an excellent opportunity to improve surgical patient access to healthcare, enable remote diagnosis, monitoring, and follow-up of patients. It could also improve patient experience, facilitate integration and optimisation of services, and provide a platform for teaching, training and research. Scaling up of these projects has been limited because of a lack of a structured, coherent approach, confidentiality issues, the low levels of adaptability and the rapid changes in technology.[8] Improved patient outcomes have been achieved in infectious diseases and maternal outcomes.[8] The adoption of mHealth technology in perioperative care has been limited to date.

The COVID-19 pandemic has created an unprecedented level of collaboration between countries across the African continent. In addition, resources such ventilators and monitoring devices are available at a level that we could not ever have envisaged securing in such a short space of time. Combining this with the ERAS programme, the surgical checklist and mHealth technology could provide a platform for sustainable improvement in perioperative care in Africa, at scale, in a short space of time. It will require all stakeholders to work together and embrace the window of opportunity that this devastating pandemic offers to improve perioperative care on the African continent.

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