

Collaborative paediatric research in South Africa and beyond

The South African Paediatric Surgical Outcomes Study (SAPSOS) completed recruitment earlier this year, and is proof once again, after the South African Surgical Outcomes Study (SASOS)¹ and the African Surgical Outcomes Study (ASOS),² that national collaborative studies are possible in South Africa. One thousand nine-hundred and seventy-six patients (1 976) were recruited for SAPSOS over a 14-day period in 43 public hospitals across South Africa. Despite limited resources and demanding clinical loads, this is a phenomenal effort.

Clearly, as South Africans, we have created a track record and established a large network of perioperative doctors who are willing, competent and keen to improve perioperative outcomes in our country. Such efforts are in line with the shift in global health priorities from the Millennium Development Goals (MDG) to Sustainable Development Goals (SDGs) for 2030 and beyond, which place surgical care in its rightful place as an essential and integral component of health care.³

The Lancet Commission for Global Surgery with a vision of “universal access to safe, affordable surgical and anaesthesia care when needed”,³ as well as the World Health Organisation (WHO) which initiated the second global patient safety challenge, and “Safe surgery saves lives”,⁴ have strengthened the SDGs and set the mandate for improving perioperative outcomes, especially in low- and middle-income countries (LMIC). A key component in achieving these goals is to address the significant information gap in LMIC. This requires an “investment in knowledge” by strengthening research and reporting of perioperative data.^{3,5} To this end, SAPSOS, SASOS and ASOS have made a substantial contribution.

The question now is where do we go to from here with paediatric perioperative outcomes research in South Africa and beyond? We believe that we should focus on three principle objectives; i) to continue to develop the culture of collaborative research and to expand our reach, ii) to “close the loop” by implementing interventions to improve the quality of patient care, and iii) to establish a national prospective database of paediatric surgical patients undergoing anaesthesia.

In order to continue to improve perioperative outcomes through an expansion of the culture of collaborative research, research and regular clinical audit should be considered a fundamental and routine part of our daily clinical practice. When one considers the demands faced in the public sector on a daily basis, we acknowledge that this is difficult. In some circumstances, a shift in attitudes is required so that clinical research is seen to be as much a part of a physician's duties as providing a clinical service. Resources should be allocated in such a way that a balance is created between the heavy clinical loads and performing essential research.

In order to create a comprehensive (and more holistic) picture of paediatric perioperative outcomes in South Africa, participation by private sector hospitals and physicians in future similar studies is crucial. Up to this point, despite pragmatic study designs, we have been unsuccessful in generating collaborative partnerships with our

colleagues in private healthcare. We hope that this will change as we move forward.

Secondly, ASOS has shown that there are numerous individuals across Africa, who, despite limited resources, are willing collaborators in perioperative outcomes research. Considering the considerable paediatric population across the continent, it is important that we engage our colleagues throughout Africa in an African Paediatric Surgical Outcomes Study (APSOS). Only then can we start to understand and quantify morbidity and mortality in paediatric surgical patients on the continent. Once we understand the burden of disease in the paediatric surgical population, we can then start “closing the loop”. “Closing the loop” involves the implementation of interventions which have been identified as having potential to improve the quality of patient care and patient outcomes.

Finally, in a previous editorial, it was recommended that following on from SAPSOS, a national prospective observational database of paediatric surgical patients should be established.⁶ An appropriate database will ensure that we are able to track key risk factors and important perioperative outcomes. This will allow for an objective assessment of our quality improvement performance.

Funding remains a key challenge. Resources are necessary for research and this includes the time necessary to conduct the research activity, as well as administrative and information technology (IT) support. Safe Surgery South Africa (SSSA) is committed to providing the administrative and IT support required for collaborative research projects. Without their support, SAPSOS would not have been possible. SSSA is valuable resource for our future studies.

Obstacles to improving perioperative outcomes and performing national collaborative studies are not insignificant. We are unlikely to achieve our goals if we do not establish strong partnerships with key stakeholders, similar to the approach adopted to attain the MDGs in South Africa.⁷ Reporting of maternal and non-surgical child health data is now obligatory, and clinicians are supported by government and provided with appropriate tools to conduct these activities.^{7,8} In order to provide the necessary advocacy, support, resources and policy direction to ensure a similar environment exists for perioperative research and outcomes reporting, we need to engage and collaborate with the National Department of Health, civil organisations, research and grant bodies, and private (local and international) funding organisations. Only once we form these partnerships and have a change in organisational culture, will quality improvement occur.

Strong leaders who champion effective change management while optimising the use of the available resources are needed. With the support of hospital administrations, the investigators of SAPSOS have provided the initial leadership and mentoring required to achieve these objectives for our children. This large collaborative group has shown that we have the capacity to conduct meaningful paediatric outcomes research in South Africa. We must now take this opportunity to make a

significant impact on the quality of care we provide to our paediatric surgical patients and to improve paediatric surgical outcomes. We, the perioperative physicians of South Africa and Africa, now challenge all stakeholders to join us and make a firm commitment to improving all aspects of paediatric public health across the continent.

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