



## Commentary

## Commentary on: Nigerian surgical outcomes – A report of 7-day prospective cohort study and external validation of the African surgical outcomes study surgical risk calculator



*and my profession forbids us to do harm to our kindred, as it is instituted for the benefit and welfare of the human race, Rhazes (AD 865–925)*

Complications after elective surgical operations are responsible for potential morbidity and mortality. In addition, unavailability of health care resources and disparities in treatment are related to poor surgical outcomes and subsequent higher rates of morbidity and mortality. Although access to surgical care is essential in lower income and underdeveloped countries, it should be emphasized that the quality of preoperative and postoperative care needs to be standardized in order to prevent from poor patient outcomes [1,2].

International Surgical Outcome Study (ISOS) is designed to evaluate the in-patient surgical outcomes internationally in low, middle and high income countries. ISOS recommends that global initiatives should increase access to surgical treatments and also they should emphasize on safe perioperative and postoperative care to lower complications and minimize surgery-related morbidity and mortality [3].

According to African Surgical Outcomes Study (ASOS) investigators, there is an essential need to increase access to surgical care in African countries. However, based on the results of ASOS, African patients are twice as likely to postoperative mortality when compared to their international counterparts [4]. Therefore, ASOS investigators recommend to world initiatives not only to increase access to surgery in Africa, but also to increase the quality of care and perioperative and postoperative measures to minimize surgery-related morbidity and mortality.

In a current prospective cohort study, Osinaike et al. [5] on behalf of Nigerian Surgical Outcomes Study (NiSOS) investigators, reported the incidence of postoperative complications, intensive care unit (ICU) admissions and death after elective surgery in Nigeria. ISOS investigated 27 countries and ASOS investigated 25 countries. NiSOS investigated 1425 patients from 79 hospitals of Nigeria. In NiSOS, postoperative complications occurred in 18.5% of whom 20% were admitted to ICU and 6% died. Total ICU admission was 6% of whom 23.5% died. Overall hospital death was 1.5%. NiSOS externally validated ASOS surgical risk calculator and ASOS risk calculator could potentially predict postoperative mortality and death.

It is recommended that national cohort studies be done in low, middle and high income countries to assess National Surgical Outcomes. National Surgical Outcome Studies (NSOS) and ISOS will

provide a precise estimate of surgical complications and surgery-related morbidity and mortality in each country. In addition, preventive measures could be designed by data retrieved from NSOSs and ISOS. Similar to NiSOS, surgical risk calculators would potentially predict perioperative and postoperative morbidity and mortality and specific measures could be considered in especial patient populations. It is essential that surgical care be provided in all areas of the world. Global surgery aims to provide access to surgical care in low and middle income countries around the world. However, safe surgical care is as critical as the availability of care itself. Preventive measures to reduce surgery-related morbidity and mortality are of potential concern in all countries. Thus, NSOS data in association to ISOS data will help health care providers to make appropriate policies to standardize surgical care and minimize morbidity and mortality in preoperative, perioperative, operative and postoperative course.

## Conflicts of interest

None.

## References

- [1] K.L. Protopapa, J.C. Simpson, N.C. Smith, S.R. Moonesinghe, Development and validation of the surgical outcome risk tool (SORT), *Br. J. Surg.* 101 (13) (2014 Dec) 1774–1783, <https://doi.org/10.1002/bjs.9638>.
- [2] B. Mullanpudi, D. Grabski, E. Ameh, D. Ozgediz, H. Thangarajah, K. Kling, B. Alkire, J.G. Meara, S. Bickler, Estimates of number of children and adolescents without access to surgical care, *Bull. World Health Organ.* 97 (4) (2019 Apr 1) 254–258, <https://doi.org/10.2471/BLT.18.216028>.
- [3] International Surgical Outcomes Study group, Global patient outcomes after elective surgery: prospective cohort study in 27 low-, middle- and high-income countries, *Br. J. Anaesth.* 117 (5) (2016 Oct 31) 601–609, <https://doi.org/10.1093/bja/aew316>.
- [4] B.M. Biccard, T.E. Madiba, H.L. Kluyts, D.M. Munlemvo, F.D. Madzimbamuto, A. Basenero, C.S. Gordon, C. Youssouf, S.R. Rakotoarison, V. Gobin, A.L. Samateh, C.M. Sani, A.O. Omigbodun, S.D. Amanor-Boadu, J.T. Tumukunde, T.M. Esterhuizen, Y.L. Manach, P. Forget, A.M. Elkhogja, R.M. Mehyaoui, E. Zoumeno, G. Ndayisaba, H. Ndasi, A.K.N. Ndonga, Z.W.W. Ngumi, U.P. Patel, D.Z. Ashebir, A.A.K. Antwi-Kusi, B. Mbwele, H.D. Sama, M. Elfiky, M.A. Fawzy, R.M. Pearce, African surgical outcomes study (ASOS) investigators. Perioperative patient outcomes in the African surgical outcomes study: a 7-day prospective observational cohort study, *Lancet* 391 (10130) (2018 Apr 21) 1589–1598, [https://doi.org/10.1016/S0140-6736\(18\)30001-1](https://doi.org/10.1016/S0140-6736(18)30001-1).
- [5] B. Osinaike, O. Ayandipo, T. Onyeka, O. Olagbe-Briggs, D. Mohammed, O. Oyedepo, A. Nuhu, F. Asudo, O. Akanmu, C. Nwokorie, A. Mohammed, M. Edubio, K. Izuora,

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