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Addressing the Menace of Surgical Site Infections in the West African Subregion: from Research to Policy

The Centre for Disease Control (CDC) describes surgical site infection as an infection that occurs after surgery in the part of the body where the surgery took place [1]. It includes all infection following surgery within 30 days of surgery or up to 1 year in the case of an implant. Of the estimated 310 million surgeries performed worldwide annually, we estimate that 37.2million (approx. 12%) will have SSIs based on our study across high-, middle- and low-income countries. [2,3] However, the prevalence rate is skewed and much higher in low- (x2.5) and middle-income (x1.5) countries compared to high-income countries. This is instructive as West African countries belong to the group of low- and middle-income countries (LMICs).

The National Institute of Health Research Global Health Research Unit on Global Surgery is a collaboration between the University of Birmingham, University of Scotland and 7 Hubs spread over Africa, Asia and North America.[4] Incidentally, 3 of the hubs are from West Africa namely: Benin, Ghana and Nigeria. These hubs from West Africa, along with others, have been at the forefront of research into addressing the menace of SSIs in surgical patients. Following on from the World Health Organisation guidelines [5] to prevent SSIs (4.7 & 4.22) that alcoholic chlorhexidine should be used for skin preparations and antibiotic impregnated sutures should be used for skin closure to reduce SSIs, our collaborative tested these 2 interventions in a randomised controlled trial in 7 countries with 5788 patients.[6] Our study found that cheaper alternatives (povidone iodine and plain sutures) affordable to most patients in our subregions are not associated with higher incidence of SSIs. The study is the largest RCT to date (and tested interventions incorporated LMICs) on the subject and it is suggested that on the strength of evidence that the WHO should now modify its 2018 guidelines. Countries in West Africa are also encouraged to develop national guidelines that incorporate this evidence.

In another international, multi-centred, cluster, randomised controlled trial testing change of gloves and instrument at wound closure (the CHEETAH trial), our collaborative decided to take up the challenge of testing the interventions which the WHO guidelines (4.20, 4.21) [5] had not made any recommendation on, due to lack of evidence.[7] The CHEETAH trial randomised 81 clusters involving 13,301 patients. The study showed significant benefit and reduction in SSI following change of gloves and instruments. To our knowledge, this is the only study to date that has tested these interventions suggested by WHO on a large scale and providing evidence for a behavioural change by surgeons and the surgical team.

It is noteworthy that surgeons from the West African subregion have contributed to the design, data collection and analyses and write up of these landmark studies. As such, we have provided evidence for cost effective and simple interventions that can reduce SSIs in our setting. As laudable as this achievement is, it is only part of the assignment. It is important that evidence is translated to practice.

The West African governments should adopt the incontrovertible evidence generated by these studies and translate them into policies of government. These could be by way of developing local guidelines that incorporate such evidence. It could also be by way of advocacy to surgeons and surgical team members to bring such information to their sufficient notice and stimulate the necessary behavioural change(s). The West African College of Surgeons and the West African Health Organisation can be used to organise, implement and monitor uptake of such guidelines. Other surgical associations are equally encouraged to facilitate the uptake of this evidence-based behavioural change among surgeons. The Association of Surgeons of Nigeria (ASON) has already taken a lead in this regard by discussing ways of engaging the Ministry of Health in adopting the evidence and incorporating it into policies. Having generated such high-quality evidence, the ball has now been passed to policy makers and other stakeholders to translate these to implementable policies and programs. The ball, as they say, in now in their courts.

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