



# Access to emergency and essential surgery obstetrics trauma and anaesthesia healthcare: a contemporary overview

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**Abstract:** Work around access to timely, appropriate and affordable emergency and essential surgery, obstetrics, trauma and anaesthesia healthcare services has been on the upswing within the global health agenda under the new field of global surgery since the year 2015. Some key milestones have been attained while many actors have come on board. The global surgical disease burden has been adequately mapped out while the cost-effectiveness of delivery of appropriate surgical health services at the first level health facility has also been demonstrated through models by development partners and academic institutions. High-level political commitment through the United Nations specialised agency for health—the World Health Organisation, has been secured in the form of a resolution and a decision. However, many issues remain unattended and many trends, among them appropriate financing for the new area of work, remain unsatisfactory. This paper presents a general overview of current work and trends in the field of global surgery as part of the greater global health agenda and offers a few projections on the future of this work. Key areas of global surgery work have been reviewed, among them leadership and coordination; advocacy and global health diplomacy; service delivery as well as training and research. The paper also covers a snapshot on how the ongoing COVID19 pandemic is affecting and influencing the global surgery agenda.

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## Introduction

The fact that many people worldwide, especially in peri-urban and rural areas of low- and middle-income countries (LMIC) as well as some pockets of the developed world, lack access to safe, timely, affordable, good quality and appropriate surgical healthcare, is no longer news to many stakeholders involved in Global Health today (1-3). This is because a lot of efforts have been invested throughout the last decade especially in the past five years, by many state and non-state actors, into generating scientific evidence on the global burden of surgical disease, while advocating for equity in access to the required healthcare for the

surgical patient (4,5). The economic impact of limited access to surgical healthcare on the individual in terms of medical and non-medical costs, is well documented and the potential economic impact of lack of action in this regard at country level in LMICs has been well projected, while policy options for improving the status quo have also been proposed through the Lancet Commission on Global Surgery (6-8). Member States of the United Nations have been urged to consider implementing improved access to essential surgery early on their path to Universal Health Coverage (UHC) as part of the overall essential benefit package by development partners such as the World Bank and the European Investment Bank (9,10). These countries

have gone ahead and made the initial commitment to strengthen emergency and essential surgical, obstetric and anaesthesia healthcare as a component of UHC through the World Health Organisation's Resolution WHA68.15 and the follow-up Decision WHA70 (22), to ensure this work is monitored till the year 2030 (11,12). Member States have also reiterated this firm commitment through regional inter-governmental platforms such as the Southern Africa Development Community (SADC), while others have gone a step further and formulated innovative national surgical healthcare improvement policy commonly referred to as the National Surgical Obstetrics and Anaesthesia Plans (NSOAP) (4,13-16). A totally new area of Global Health work encompassing the above and other related issues has emerged under the term "Global Surgery" and many non-state actors (NGOs, Academic Institutions, Professional Associations, Philanthropic organisations, faith-based institutions and private sector) and stakeholders involved in this work are now active (4,17-20).

### Leadership & coordination

While the political commitment to improve access to safe, timely, affordable, good quality and appropriate surgical healthcare is universal and was reaffirmed through the 2019 UN High-Level Declaration on Universal Health Coverage (UHC), the progress on actualizing this commitment at global, regional and country level has been slow and the actual needed financial investment elusive (12,21,22). A global coordination mechanism to mobilize and direct the needed collaborative partnerships to advance this work is yet to be developed and established, while global, regional and country leadership and support from the UN's specialized agency on health, the World Health Organisation (WHO), has not gone beyond facilitating the adoption of resolution WHA68.15 and decision WHA70 (22), except for the words of continued commitment and prioritization coming from the current Director General and one or two of his regional directors (23-26). Stakeholders have indicated that, while global coordination is essential for maximising joint work and so as not to overwhelm countries, a demand driven approach is also important to enable local stakeholders to identify gaps and optimal solutions for the delivery of surgical services (27,28). Member States working with non state actors continue to engage with the different leaders and at different levels of the WHO to try and gain an understanding of the "whole organization approach/mechanism" that the

WHO might be putting in place during its current phase of internal reform under new leadership (29,30). Other opportunities for reform at the WHO present themselves today through strong calls coming from Member States who are also major funders of the organizations like the United States of America on COVID19—the United States of America also happens to have been a co-sponsors of resolution WHA68.15; introducing and successfully guiding the agenda item through the Program Budget and Administrative Committee (PBAC) and Executive Board (EB) multilateral negotiations (31,32). Current ongoing operational and management/administrative reform at the WHO must arm the organization, capacitating it to give a comprehensive leadership and response, at all levels within and outside of the organization, to the health system and health outcome challenges caused by the huge global and country burden of surgical disease. Member States have, nevertheless, taken up the challenge to tackle the burden of surgical disease working together at regional level as demonstrated by the Southern African Development Community (SADC) Health Ministers Conference Decision 1 of 2018 in Windhoek, Namibia, and Decision 21 of 2019 in Dar-Es-Salaam, United Republic of Tanzania (13). These regional commitments have given birth to the setting-up of the Wits-SADC Regional Collaboration Centre on Surgical Healthcare at the University of Witwatersrand that chairs and coordinates the work of a diverse and active SADC Technical Experts Working Group (TEWG) on surgical healthcare improvement. At country level, Member States especially in the AFRO Region of the WHO have continued to make small progress and are at different stages of developing and implementing their unprecedented SDG oriented national surgical healthcare policy covering the clinical areas of Emergencies/Critical Care, Surgery, Obstetrics/Gynaecology, Trauma and Anaesthesia—commonly referred to as the National Surgery Obstetrics and Anaesthesia Plan (NSOAP) (3,14). The economic argument for providing surgery at the District Hospital Facility as opposed to the referral (secondary or tertiary level) facility within a country has also been clearly illustrated (33). To harness this good will, taking advantage of the current Member State political commitment, the WHO must take up its normative responsibility and work to provide appropriate guidelines, set the right standards in policy and service/practice as well as lead in this area by coordinating and mobilizing the many different state and non-state actors and stakeholders involved in surgical healthcare while ensuring that equitable

relief, in the form of appropriate health service delivery to the surgical patient, is prioritized and the centre of all joint efforts (34-36).

### Diplomacy and advocacy

Sustained advocacy combined with effective global health diplomatic efforts have been made since the watershed year, 2015. This has seen the continued inclusion of the public health challenges posed by the huge surgical disease burden and the current lack of access to appropriate care into the current global health agenda (37,38). In the most recent past however, the onset of the COVID19 Pandemic has threatened to reverse all the gains that the global surgery movement has achieved in integrating global surgery within the Global Public Health Agenda—with governments and development partners focusing all efforts and resources back into infectious disease control. A time such as the current one requires innovative and strategic approaches to advocate for the inclusion of the neglected surgical patient within current public health priorities. As an example of Best Practice in this regard, the SADC TEWG on Surgical Healthcare has used the COVID19 pandemic response as an entry point to mobilise and accelerate its work leveraging technology to host its virtual “SADC-SOA/COVID19 Situation Room” weekly meetings. The TEWG has gone ahead to prepare a regional strategy and is developing tools in the form of protocols on how countries within the SADC sub-region can sustain the provision of safe emergency and essential surgical healthcare services during the COVID19 pandemic and how they can leverage investments during this pandemic response to advance further their earlier work on policy and programs to improve access to safe surgery. Outcomes of the TEWG work are shared with and transmitted to Member States through the SADC secretariat as policy advisory.

Advocacy for inclusion of surgical healthcare services (i.e., Emergencies/Critical Care, Surgery, Obstetrics/Gynaecology, Trauma and Anaesthesia) in the current broader drive to strengthen Health Systems, has mostly been led by none state actors who have also develop the new fields of “Global Surgery” and “Academic Global Surgery” as the frameworks and platforms for advancing work to address the burden of surgical disease within the broader field of Global Health. Emerging areas of work within the field of Global Surgery/Academic Global Surgery includes, but is not limited to, advocacy and global health diplomacy; surgical health policy formulation and analysis; surgical

healthcare service delivery; surgical skills training/education and health research. How we can continue work and deliver on our joint commitment in global surgery during the current COVID19 pandemic and beyond, if ever, is a new challenge that we must address at global, regional and country level. The preliminary impact of the COVID19 pandemic response on surgical health services delivery at country and facility level have been mapped while the SADC could provide some good lessons on the regional approach (39-41).

Overall, the advocacy work on the need for access to safe surgical healthcare has mostly remained “Top-Down” in approach considering there has been very limited inputs from the surgical patient who is supposed to be the centre of all efforts and from the rural primary healthcare based healthcare worker who is the true frontline. Both the surgical patient, the community and the primary healthcare based healthcare worker must be brought fully on board in the policy and decision making processes around surgical healthcare (42). The surgical patient and frontline healthcare worker could be given appropriate health education that could be coupled with education in social accountability approaches and tools to enable the community to engage and encourage their leaders to actualize national commitments made through resolution WHA68.15 to strengthen access to emergency and essential surgery obstetrics and anaesthesia as a component of their work towards UHC while demanding accountability. Advocates of improved access to safe surgical healthcare services must “not leave behind” the surgical patient and the community. These two groups must be fully engaged so that the advocates are not only truly aware of the patient and community needs and priorities as regards surgical disease, but also so that the patients and community are afforded the opportunity to get involved and give this justified advocacy a human face and have a say in a matter that directly and personally affects them.

Advocacy messaging around access to surgical healthcare continues to grow exponentially online, especially on social media and around global health events/meetings/conferences where papers with similar titles/topics are now a common feature among the many presentations. Advocacy effort around access to safe, affordable and timely surgical healthcare could be harnessed and made more impactful if well-coordinated, targeted, and evidence based; focusing more on the positive narrative of how improved surgical healthcare can (I) contribute to strengthening the health system, (II) contribute to improving health outcomes and

(III) contribute to improved social economic status of the surgical patient by reducing on their physical disability while restoring their social dignity; than the negative narrative of describing only the magnitude of the social economic challenges cause or exacerbated by the huge global burden of surgical disease (43-48).

Other contributions of safe surgical healthcare to global public health must also be celebrated in global surgery advocacy. A few good examples include; Medical Male Circumcision in the fight against HIV/AIDS, the current contributions by anaesthesia and critical care in the management of severe COVID19 patients, not forgetting the contributions being made by the “Surgical Face Mask” to COVID19 prevention (49-51).

### Service delivery

Surgical healthcare systems are complex and cross cutting and when fully functional and well established, they are part of all levels of healthcare, a part of every health facility and an essential health service for every age group (16,52,53). Furthermore, surgical healthcare services are delivered through a well-coordinated multi-professional partnership using a myriad of expensive and sometimes simple tools and equipment (54,55). For these and other reasons, surgery is erroneously considered expensive and is poorly understood by many health policy makers and health system managers. It has also been erroneously viewed as only possible at higher levels of care with specialist healthcare workers (56-59). This lack of understanding/interest and lack of systematic and sustained investment in making surgical healthcare services available has resulted in these services being very limited in availability, unsafe and costly for the patient who has had to bear both the medical and none medical costs associated with the management of surgical disease (22,58,59). Fortunately, the focus on the national surgical healthcare policy (NSOAP) is the improvement of access to appropriate (bellwether procedures proposed by the LCoGS) surgical healthcare services as close to the community as possible to be delivered at the District Hospital facility (7,14). It outlines at the least, a minimum package of surgical healthcare services/procedures that must always be delivered at the District Hospital health facility. While many actors in global surgery might view surgical healthcare service-delivery as the final phase in the chain of sequential and sustained efforts, it must be pointed out here that surgical healthcare service-delivery, in the form of a pilot-projects targeting a single district where well

documented and appropriate surgical healthcare could be provided over time, could prove to be an effective starting point that could provide the much needed evidence and impetus for the development of the National Surgical Healthcare Policy. Such pilot projects are potentially not beyond the well-coordinated efforts of a consortium of current global surgery institutions/actors who continue to struggle to convince Member States and their development partners to invest in improved access to surgical healthcare due to lack of local data/information/evidence on impact/returns on investment as well as the lack of “Best Practice models” to learn from. A model of interest in this regard, is the ACS-COSECESA Surgical Training Collaborative at Hawassa University, Ethiopia, supported by several American academic institutions, the local university and Ethiopian Ministry of Health (60).

It is yet to be determined how the COVID19 pandemic and response will impact access to surgical healthcare services that had previously been provided by medical missions from high income countries. At country level, the short-term effect of the COVID19 pandemic response has been the total suspension/cancellation of academic training as well as all none emergency and none essential surgical services/outreach while emergency and essential surgery had to continue through with limited personal protective equipment (PPEs) for surgical teams including training on their appropriate use (61,62). This has continued to put the limited surgical health workforce, especially anaesthetists, at greater risk of COVID19 infection and continues to contribute to “loss of man hours” from the already limited surgical healthcare workers who are still not prioritized for accelerated services at COVID19 screening centres while their COVID19 test specimen are not getting accelerated “priority testing” in the face of the limited country testing capacity in most LMICs that have also huge backlogs spanning more than two weeks of waiting for clearance before the affected health worker can get out of quarantine and get back to delivering the much needed emergency and essential surgical healthcare services.

The SADC TEWG on surgical healthcare improvement has provided the following as policy advisory to SADC Member States, working through the SADC secretariat, for action during the COVID19 pandemic urging them to (I) maintain and support the provision of emergency and essential surgical healthcare services while protecting the surgical health workforce from COVID19 infection (II) exploit the contribution that members of the surgical teams, especially anaesthesia/critical care, can make towards

the clinical care of severely ill COVID19 patients that need oxygen therapy and life support including emergency training for infection prevention and task-sharing for a comprehensive COVID19 national response (III) leverage investments made as part of the COVID19 pandemic national response, especially in life support capacity, to continue their work towards a strengthened and improved surgical healthcare system that guarantees access to all who need it.

A SADC adapted and regionally harmonized protocol for the clinical management of surgical patients whose COVID19 status is known/unknown is under development led by the Republic of South Africa and builds on experiences learnt in other parts of the world.

### Research & training

Surgical health research and training/education are areas of work in global surgery, that are part of normative work for academic institutions and professional associations, that could provide strategic impact if well coordinated and executed (63-65). Research in the last decade has focused on describing the problems around the surgical disease burden, its magnitude, associated injustice and sometimes focusing on a single procedure or disease condition rather than having a systems approach. Both research and training could improve on the much needed and valuable surgical health information while improving the quality of both the surgical healthcare information generated as well as the surgical healthcare service provided. Appropriate skills transfer is required to build the needed health workforce that can provide access to appropriate, safe, affordable and timely surgical healthcare by implementing national surgical healthcare policy. Research around access to surgical healthcare work must allow LMIC partners to get equally involved in setting the priority research questions, get them equally involved in the research grant management and not only provide research grant proposal information and a research site. LMIC partners must be given the opportunity to be first, second or last co-first authors in publications on research done in their LMIC sites (66-68). Furthermore, there is an urgent need to ensure surgical health research capacity sustainability in LMICs through appropriate research skills transfer including ownership and management of research data bases including grant management.

Global surgery research, just as other aspects of global health, must above all, generate evidence to inform

advocacy, health policy, help improve standards in practice and guarantee quality of services provided to the surgical patient. It must also demonstrate the impact that improved surgical healthcare has on other global health priorities such as non-communicable diseases prevention and management, and improvement of maternal and child health, among others areas.

It has been observed with great interest that the anaesthesia and critical care part of surgical healthcare is critical to the case management of severe COVID19 patients through life support services. The COVID19 pandemic has accelerated the use of mobile phone technology and internet by surgical teams and experts to not only train and conduct multi-centre large scale surgical healthcare research, but also has helped to engage in effective collaborative networks and partnerships (69). We in LMICs remain hopeful that effective use of technology in global surgery can see us strategically close the distance gap between HICs and LMICs; rural and urban areas (telemedicine) as well as help us address current challenges that exists in managing the surgical patient's health information to improve the quality of surgical health services delivered.

### Way forward

In order for the past gains in global surgery to be secured; in order for the global surgery movement to be sustained and effective and worthy of investments from national governments and development partners, we will have to improve on some aspects of our work. Firstly, our collective efforts should not only be well coordinated and sustained but they must be focused and result oriented with the patient at the centre of everything we do. We must leverage already available entry points within the wider global health agenda and integration within health systems at country level. We must be willing to develop and implement a prototype of surgical healthcare service delivery system for the district hospital and generate evidence to showcase how surgical healthcare can be a solution to pre-existing health challenges such as reduction of maternal mortality on one hand, and how it can contribute to the management and control of new health challenges such as the COVID19 pandemic response on the other hand.

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