The road to 2030: introduction to the global surgery focused issue

This year, in 2020, we "celebrate" 5 years since the release of the Lancet Commission on Global Surgery (LCoGS) Global Surgery 2030 report (1) and the unanimous adoption of the World Health Assembly (WHA) Resolution WHA68.15 by all World Health Organization (WHO) Member States (2,3). Ambitious targets had been set by the LCoGS and WHO to comprehensively strengthen surgical ecosystems across the globe with an emphasis on the integration of emergency and essential surgical care within universal health coverage (UHC) plans (4). In this "Global Surgery" focused issue of the *Journal of Public Health and Emergency (JPHE)*, current and future global surgery leaders from around the world shine their light and expertise on various layers of the field of global surgery, including particular attention for under-addressed issues. As we move closer to 2030, increased coordination, investment, and intersectionality is needed to achieve the LCoGS targets and, more broadly, those of the Sustainable Development Goals (5,6).

Building on the foundation laid out by the LCoGS and other global surgical stakeholders in the past 5 years, Dr. Emmanuel Makasa gives a contemporary overview of the global state of access to surgery, obstetrics, and anesthesia care. His extensive experience as the champion behind the development of the WHA68.15 further empowered him to help lead his home country Zambia to become the first country to develop a National Surgical, Obstetric, and Anesthesia Plan (NSOAP) (7,8). More recently, he has been supporting the Southern African Development Community leadership in a regional approach to NSOAP development. In line with these developments, Dr. Ché L. Reddy *et al*. present an overview of the progress of NSOAPs to date, highlighting opportunities for moving forward in an era of rapid NSOAP development by dozens of countries worldwide and a need for sustainable implementation and longitudinal evaluation. Ultimately, this will require more robust international collaboration and data generation to assess the impact and progress made on global surgical development. Dr. John Rose and colleagues make exactly that argument, recognizing the critical role of information management and data infrastructure to advance the global surgery agenda. While mandated and standardized reporting of, for example, LCoGS indicators or World Development Indicators does not exist for countries, the limited available data and resulting imputations suggest that the current progress is encouraging but not sufficient to reach the LCoGS 2030 targets (5,9). Dr. Kee Park and colleagues discuss the overarching and synergistic role of international organizations, such as the WHO and United Nations in supporting and reinforcing grassroots efforts to tackle global gaps in access to surgical care.

Various recent developments, however, are promising for catalyzing accelerated change within global surgery. Dr. Xiya Ma and colleagues illustrate various opportunities to integrate innovation in global surgery, both from a technical (e.g., low-cost technologies and equipment) and a systems perspective. Such developments are especially necessary considering the pervasive disparities in functional equipment in LMICs, which often rely on outdated or dysfunctional donations and/or cannot afford the high costs demanded by high-income country-sourced suppliers (10). This leads to local innovative solutions to reduce costs through makeshift equipment or reusing materials, lessons of which may transcend borders to help reduce healthcare costs in other countries worldwide (11). Along those lines, international collaborations from a clinical and academic perspective have been crucial in bridging contemporary gaps in global surgical care. Desmond Jumbam *et al*. elaborately describe the impact of non-governmental organizations in both care delivery and supply chain support, as well as multi-stakeholder discussions and government support in the development and implementation of NSOAPs, national health plans, and other health policies. This is complemented by temporary solutions brought in by humanitarian care organizations, as eloquently illustrated by the experiences from and overview by Dr. Kathryn Chu and colleagues. From an academic perspective, Dr. Antonio Ramos-De Medina presents contemporary international research collaboratives to improve the quality of scientific evidence underpinning clinical care in LMICs and broader global surgery research. Similarly, Dr. Woong-Han Kim *et al*. present an overview of characteristics and successes of select academic global surgery programs, instilling their own experience from Seoul, South Korea, throughout. Collectively, civil society stakeholders, ranging from health workers to non-governmental organizations to academia, are at the forefront of catalyzing tangible and sustainable change to leave no surgical patient behind.

Recent years have also shone a light on individual and often neglected surgical subspecialties. For example, every year, over five million people with neurosurgical conditions do not receive the treatment they need worldwide (12). Similarly, 93% of people in LMICs (or six billion people worldwide) are estimated to lack access to safe, timely, and affordable cardiac surgical

care when needed (13). Dr. Lubna Samad *et al*. highlight comparable and disturbing disparities in children's surgery in LMICs. Approximately 1.7 billion children and adolescents do not have access to surgical care, majorly impeding countries' projected socioeconomic growth due to preventable infant and child mortality and morbidity (14). All of this is aggravated as a result of widespread workforce disparities, both in absolute (workforce shortages) and relative numbers (gender-based imbalances). Dr. Zineb Bentounsi *et al*. discuss the global surgical workforce shortages through a hopeful lens: that of building capacity through sustainable, bilateral, academic partnerships, which are increasingly prioritized on the global health agenda compared to the former emphasis on fly-in fly-out missions. Dr. Jacquelyn Corley and colleagues further describe the sad reality of gender inequity in surgical specialties in LMICs and high-income countries alike. It has become increasingly clear that attaining UHC will not be possible without being universal and inclusive in health policy plans, capacity-building, and patient care; nevertheless, surgical disciplines remain largely male-dominated despite the growing evidence of pervasive disparities and the need for gender inclusivity in medicine and surgery (15).

The current COVID-19 pandemic has greatly set back efforts made over the years due to shifts in resources, widespread procedural cancellations, travel restrictions, and increasing socioeconomic barriers (16,17). The impact of the pandemic has been and will be especially felt in the workforce, infrastructure, and service delivery domains, similar to the 2014–2015 Ebola outbreak (18,19). In many countries, especially the heavily hit high-income countries in Europe and North America, intensive care capacity and broader health systems are pushed to and above their limits with long-lasting implications for population health and economies as a whole (20). While there was similar, if not worse, fear for insurmountable surges in COVID-19 cases and hospitalizations in LMICs, most sub-Sahara African and Southeast Asian countries have managed much better to date than high-income country epicenters (16,21). This maintains hope and proactively calls upon the global community to learn from this outbreak similar to local lessons from Ebola, SARS, and MERS; however, it also emphasizes the need to integrate surgical ecosystems with emergency preparedness plans: critical care capacity is vital amidst pandemics, whereas emergency and essential surgical care will always remain needed.

There is a long way to go until the five billion people who lack access to safe, timely, and affordable surgical, obstetric, and anesthesia care receive the care they need. The question of integration of surgical services in UHC plans and LMICs' growing health systems is no longer a question of "if" and "why" but rather "when" and "how". I thank the authors for sharing their expertise with us in this focused issue, the journal for providing a platform for scholarly discussion, and the readers for their interest, dialogue, and dedication to leaving no patient behind. 2030 is less than 10 years away, but together, we can make it happen.

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Footnote

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References

1. Meara JG, Leather AJ, Hagander L, et al. Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development. Lancet 2015;386:569-624.
2. World Health Organization. WHA68.15: Strengthening emergency and essential surgical care and anaesthesia as a component of universal health coverage. 2015. Available online: https://apps.who.int/gb/ebwha/pdf_files/wha68/a68_r15-en.pdf
3. Price R, Makasa E, Hollands M. World Health Assembly Resolution WHA68.15: "Strengthening emergency and essential surgical care and anesthesia as a component of universal health coverage"—addressing the public health gaps arising from lack of safe, affordable and accessible surgical and anesthetic services. World J Surg 2015;39:2115-25.
4. Reddy CL, Vervoort D, Meara JG, et al. Surgery and universal health coverage: designing an essential package for surgical care expansion and scale-up. J Glob Health 2020;10:020341.
5. Bouchard ME, Justiniano J, Vervoort D, et al. Cross-sectional analysis tracking workforce density in surgery, anesthesia, and obstetrics as an indicator of progress toward improved global surgical access. IJS Glob Heal 2020;3:e26.
6. Roa L, Jumbam DT, Makasa E, et al. Global surgery and the sustainable development goals. Br J Surg 2019;106:e44-52.
7. Makasa EM. Universal access to surgical care and sustainable development in Sub-Saharan Africa: a case for surgical systems research comment on “Global surgery - informing national strategies for scaling up surgery in Sub-Saharan Africa”. Int J Heal policy Manag 2019;8:58-60.
8. Mukhopadhyay S, Lin Y, Mwaba P, et al. Implementing World Health Assembly Resolution 68.15: national surgical, obstetric, and anesthesia strategic plan development--the Zambian experience. Bull Am Coll Surg 2017;102:28-35.
9. Holmer H, Bekele A, Hagander L, et al. Evaluating the collection, comparability and findings of six global surgery indicators. Br J Surg 2019;106:e138-50.
10. Marks IH, Thomas H, Bakhet M, et al. Medical equipment donation in low-resource settings: a review of the literature and guidelines for surgery and anaesthesia in low-income and middle-income countries. BMJ Glob Health 2019;4:e001785.
11. Ma X, Thomas HS, Thomas HS, et al. Comment on "The compounding access problem for surgical care: innovations in the post-COVID era". Ann Surg 2020. [Epub ahead of print]. doi: 10.1097/SLA.0000000000004226.
12. Dewan MC, Rattani A, Fieggen G, et al. Global neurosurgery: the current capacity and deficit in the provision of essential neurosurgical care. Executive Summary of the Global Neurosurgery Initiative at the Program in Global Surgery and Social Change. J Neurosurg 2018. [Epub ahead of print]. doi: 10.3171/2017.11.JNS171500.
13. Vervoort D, Swain JD, Pezzella AT, et al. Cardiac surgery in low- and middle-income countries: a state-of-the-art review. Ann Thorac Surg 2020. [Epub ahead of print]. doi: 10.1016/j.athoracsur.2020.05.181.
14. Mullapudi B, Grabski D, Ameh E, et al. Estimates of number of children and adolescents without access to surgical care. Bull World Health Organ 2019;97:254-8.
15. de Costa J, Chen-Xu J, Bentounsi Z, et al. Women in surgery: challenges and opportunities. IJS Glob Heal 2018;1:e02.
16. Ma X, Vervoort D, Reddy CL, et al. Emergency and essential surgical healthcare services during COVID-19 in low- and middle-income countries: a perspective. Int J Surg 2020;79:43-6.
17. Nepogodiev D, Bhangu A. Elective surgery cancellations due to the COVID-19 pandemic: global predictive modelling to inform surgical recovery plans. Br J Surg 2020;107:1440-9.
18. Mazingi D, Navarro S, Bobel MC, et al. Exploring the impact of COVID-19 on progress towards achieving global surgery goals. World J Surg 2020;44:2451-7.
19. Bundu I, Patel A, Mansaray A, et al. Surgery in the time of Ebola: how events impacted on a single surgical institution in Sierra Leone. J R Army Med Corps 2016;162:212-6.
20. Ma X, Vervoort D. Critical care capacity during the COVID-19 pandemic: Global availability of intensive care beds. J Crit Care

2020;58:96-7.
21. Ademuyiwa AO, Bekele A, Berhea AB, et al. COVID-19 preparedness within the surgical, obstetric, and anesthetic ecosystem in Sub-Saharan Africa. Ann Surg 2020;272:e9-13.

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