Surgical and anaesthesia care are undeniably critical to strengthening healthcare systems worldwide and they are steadily gaining support from the World Health Organization (WHO). Former Director-General Halfdan Mahler remarked in his address to the World Congress of the International College of Surgeons in 1980 that surgical (and anaesthetic and obstetric) resources should be scrutinised according to social justice principles.1 His vision of social justice in the realm of surgery and anaesthesia remained in the background of global public health, but began to gain momentum in the 21st century. World Health Assembly (WHA; the decision-making body of WHO) resolution 68.15 on strengthening emergency and essential surgical care and anaesthesia as a component of Universal Health Coverage (UHC), the Lancet Commission on Global Surgery (LCoGS)2 and Essential Surgery. Disease Control Priorities,3 which lay out the health economic case for surgical care and anaesthesia, were all launched in 2015. They serve as key rallying points for advancing surgical, anaesthesia and obstetric (SAO) care.

The scale of the global disease burden of surgical conditions was underestimated prior to the LCoGS, which demonstrated that 5 billion people were lacking timely access to safe and affordable surgery and anaesthesia.4 This disparity is aggravated by a severe lack of funding: whereas infectious diseases (HIV/AIDS, tuberculosis and malaria) have a US$5 billion annual global budget to address 3 million deaths annually, avertable surgical deaths total 16.9 million annually and have a US$0 global budget.5 Furthermore, avertable surgical deaths are expected to increase significantly over the next few years with the projected rise in global deaths due to non-communicable diseases (NCDs); demand for surgical care and anaesthesia increases in parallel with increases in NCDs. Cancer, ischaemic heart disease and cerebrovascular disease are the three most common killers globally and will likely remain so in the coming years.6 Deaths from road traffic accidents, among other injuries, are also projected to increase, of which many may be averted by surgery and anaesthesia. Safety is intimately linked to strengthening SAO care across numerous linked domains, from anaesthesia risks, surgical disease burden, morbidity and mortality to outcomes, SAO workforce and even pain management. Strict adherence to global safety standards for anaesthesia and surgery is critical, as surgical disease accounts for 30% of the global disease burden.7 Unsafe perioperative practices in anaesthesia are linked not only to surgical outcomes, but also to maternal mortality worldwide.7 Risks associated with anaesthesia are significantly disparate across countries and settings, with the vast majority of risk found in low- and middle-income countries (LMICs). The risk of perioperative mortality from anaesthesia in LMICs remains high at around 5–10%; this compares with 0.0005% (1 in 200,000 cases) in high-income countries as a result of improvements in anaesthesia safety and practice.8 Inadequate anaesthesia workforce density, training and support also hinder operative care in LMICs. Whereas in high-income countries such as the UK or USA there is one trained anaesthesia provider per 4000–5000 persons, in LMICs there are much lower ratios, such as one provider per 3.6 million people in Afghanistan.9–11 Safety in pain management and administration of pain medications is also critical from an anaesthesia perspective, for acute and chronic pain in all populations.

Safety is inextricably linked to continued global healthcare improvements, as well as strengthening surgical and anaesthesia care. Good health and well-being is one of the pillars of the United Nations (UN) Sustainable Development Goals also launched in 2015 (i.e. SDG3), the successors to the UN Millennium Development Goals.12 At least nine of the 13 SDG3 targets are directly or indirectly addressed by improving anaesthesia and surgical safety standards and practices worldwide, including SDG3.8 on UHC and a direct link to WHA resolution 68.15.13 Furthermore, SAO care is also linked to many of the other 17 SDGs. These strengthening efforts are addressed through all levels of healthcare, from access to essential medicines to health systems integration. Stronger SAO care cannot be accomplished without...
simultaneously addressing safety concerns and disparity via advocacy, resource development, service access and delivery, data collection and analysis, and workforce training and competence. Baseline data collection on surgical and anaesthesia care is part of the core of WHA resolution 68.15, which directly mentions safety as a focus of these efforts. Although this initial resolution called for a one-time report on implementation progress in 2017, WHA Decision Point 70.22 was adopted in 2017, mandating continued biennial progress reports on implementation from the WHO Secretariat. The WHO Indicators.

Progress in SAO care advocacy has occurred, including on the global stage through the WHO. The six major indicators on safety, accessibility and economic burden of surgical and anaesthesia management of disease published by the LCoGS were successfully incorporated into the 2015 WHO 100 Core Health Indicators: postoperative mortality, surgical volume, 2-hour access to services, SAO workforce density and risk of impoverishing and catastrophic health expenditures related to surgical and anaesthesia care. All but one of these, catastrophic health expenditure, was preserved in the 2018 WHO Indicators. Recent safety-focused SAO efforts from the WHO include safety checklists, the creation of collaborative safety standards, international safe anaesthesia guidelines, surgical site infection guidelines and promoting safe essential medicines and their use. Checklists for trauma care, surgical safety and safe childbirth have been developed by the WHO and globally disseminated to help all health systems implement and provide safer services, thus ideally improving SAO outcomes. The WHO and the World Federation of Societies of Anaesthesiologists (WFSA) published International Standards for a Safe Practice of Anaesthesia in May 2018 as minimum safety standards for all anaesthesia providers and settings. Multiple campaigns on safe administration practices for essential medicines, such as ketamine, narcotics and antibiotics, have been launched, in part with the WHO, to promote the safe and judicious usage of these agents without causing patient harm. The current WHO Patient Safety Campaign is on medication safety. Safety must also be considered for surgical and anaesthesia providers, that is, safety from infectious diseases such as Ebola, as well as harm from local natural and man-made events.

Five academic and medical institutions around the world have joined efforts to become official WHO collaborating centres for surgery and anaesthesia. Centres from all WHO regions have joined efforts to improve safety in these domains. The WHO and the World Federation of Societies of Anaesthesiologists (WFSA) published International Standards for a Safe Practice of Anaesthesia in May 2018 as minimum safety standards for all anaesthesia providers and settings. Multiple campaigns on safe administration practices for essential medicines, such as ketamine, narcotics and antibiotics, have been launched, in part with the WHO, to promote the safe and judicious usage of these agents without causing patient harm. The current WHO Patient Safety Campaign is on medication safety. Safety must also be considered for surgical and anaesthesia providers, that is, safety from infectious diseases such as Ebola, as well as harm from local natural and man-made events.

Five academic and medical institutions around the world have become official WHO collaborating centres for surgery and anaesthesia. Centres from all WHO regions have joined efforts to strengthen surgical and anaesthesia care, with the goal of creating not only bidirectional relationships with the WHO, but also international collaborative networks. Resolution 68.15 has been advanced at the WHO General Programme of Work, a 5-year strategic plan outlining WHO priorities. Its main focus includes promoting health, keeping the world safe and serving the vulnerable. These broad priorities are supported by specific ‘triple billion goals’ to improve access for an additional 1 billion people to UHC, better protection from health

The planning phase should include special consideration of the safety of vulnerable populations, including obstetric and paediatric patients and those who are injured. Children are particularly susceptible to unsafe practices, as the same challenges facing the surgical and anaesthesia care of the adult patient are even more pronounced, such as fewer paediatric-trained providers, as well as there being additional paediatric-specific challenges. Children under 15 years make up on average 43% of the total population in sub-Saharan Africa (with this figure being as high as 50% in some countries) and 26% of the total world population, which places additional stress on already limited paediatric surgical and anaesthesia resources in LMICs. Adult surgeons may choose to not operate on these children because of the higher risks, unfamiliarity with unique pathologies and children’s inability to pay for services. Strategic alliances, such as the Global Initiative for Children’s Surgery, include all paediatric surgical and anaesthesia services to support care for this vulnerable population.

Patients with traumatic injuries represent another vulnerable population and highlight safety disparities, both in healthcare as well as in prevention. These are often treatable and remain most prevalent and most severe in LMICs. Of the disease burden that could be averted by surgical and anaesthesia system scaling up at first-level LMIC hospitals, 68% would be related to injuries. Safety through injury prevention is also critical, as only 7% of the world’s population has adequate legal protection from the five major risk factors for road traffic accidents: speed, drink driving, helmets, seatbelts and child restraints. The incoming leadership at the WHO has developed the 13th General Programme of Work, a 5-year strategic plan outlining WHO priorities. Its main focus includes promoting health, keeping the world safe and serving the vulnerable. These broad priorities are supported by specific ‘triple billion goals’ to improve access for an additional 1 billion people to UHC, better protection from health
emergencies and better health. Scaling up safe surgical and anaesthesia care are critical to achieving these priorities and goals, as healthcare safety affects everyone’s health.

REFERENCES


