

# IFMSA Policy Document

## Universal Access to Safe Surgery and Anesthesia

Proposed by Team of Officials

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### Policy Commission

- Fereshteh Bagheri, IMSA Iran [fereshte76@gmail.com](mailto:fereshte76@gmail.com)
- Mostafa Wassim, IFMSA Egypt [mostafaogv@gmail.com](mailto:mostafaogv@gmail.com)
- Lucía Pérez Gómez, Liaison Officer for Medical Sciences and Research Issues, [lsr@ifmsa.org](mailto:lsr@ifmsa.org)

### Policy Contributors

- Antofie Elena-Adelina, FASMR Romania, SWG Coordinator
- Ignacia García Valdés, IFMSA-Chile
- IZERE Salomon, MEDSAR Rwanda
- Rena Mallillin, AMSA- Philippines
- Nour Kabbes, IFMSA-Quebec, Canada
- Vedant Shukla, MSAI India
- Ahmed Wardany Hassan, IFMSA-Egypt

## Policy Statement

### Introduction:

In 2015, all United Nations Member States adopted the 2030 Agenda for Sustainable Development, which comprises 17 sustainable development goals (SDG). The objective is to establish a global partnership to reach those goals collectively and address those urgent calls to action. The 2030 Agenda for Sustainable Development states that universal health coverage must be achieved to promote physical and mental health and well-being and extend life expectancy for all. The World Health Organization (WHO) states that “Universal Health Coverage (UHC) means that all people have access to the health services they need, when and where they need them, without financial hardship”. The reality that surgical treatment is not accessible as part of health services exists in many parts of the world, threatening the realization of UHC. Global Health initiatives can be practical tools to address several points: eliminating poverty, ensuring good health and well-being, promoting decent work and economic growth, and reducing gender inequalities within and among countries. However, global surgery is often overlooked and neglected in global health initiatives. With the rise of chronic disease complications that need surgery and trauma injuries, there is a growing need for equitable, resilient and responsive surgical systems worldwide. The lack of access to surgery affects mortality and morbidity rates worldwide and constitutes a growing burden on societies. Thus, universal access to safe surgery and anesthesia must be prioritized to reach more equitable health systems.

### IFMSA position:

Universal access to safe surgery and anesthesia is a fundamental component of the right to health that should not be denied to anyone based on socioeconomic status, geographical location, or cultural background. Lack of access to these essential services is a significant public health issue worldwide, leading to death and disability. The International Federation of Medical Students' Association (IFMSA) is committed to addressing this issue. IFMSA believes universal access to safe surgery, and anesthesia should be a global health priority. It's time for governments to take bold steps to increase their focus on surgery and anesthesia and to procure coverage for surgical and anesthesia healthcare personnel. They must also ensure surgical and anesthesia resources supply to improve safe access to surgery and anesthesia.

Furthermore, IFMSA Affirms that surgical and anesthesia skills should be guaranteed and improved, especially in low-resource settings, through training endorsed by international surgical standards. Access to these essential healthcare services must be available to all individuals, regardless of their financial status or geographical location. Medical students worldwide have a crucial role in advocating for policies promoting universal access to safe, affordable surgical and anesthesia care. Through their efforts, policies can be shaped to ensure that everyone has access to these critical healthcare services.

### Call to Action:

#### Governments to:

- Establish and implement policies and regulations prioritizing universal access to safe surgery and anesthesia as a fundamental component of healthcare systems.
- Consider all vulnerable groups when designing and implementing Universal Health Coverage, including surgical care, and ensure that their health needs are met.
- Allocate financial resources to support developing and maintaining surgical care infrastructure, including hospitals, clinics, and operating rooms.
- Investing in the training and education of healthcare professionals in surgery and anesthesia ensures an adequate workforce to meet the population's needs.
- Ensure healthcare systems have adequate infrastructure, supplies, and equipment for safe surgical interventions and anesthesia administration.

**World Health Organization (WHO) and United Nations (UN) to:**

- Mobilize resources, including financial support and technical assistance, to strengthen healthcare systems and infrastructure related to surgery and anesthesia.
- Support capacity-building by providing training programs, supporting educational institutions, and facilitating knowledge transfer in low-resource settings.
- Collect data, research, and monitor surgical care and anesthesia outcomes to improve understanding and identify solutions.
- Provide technical assistance to governments within the shape of countrywide Universal Health Coverage including Surgical Care implementation frameworks.
- Facilitate collaboration and coordination among countries, stakeholders, and partners to ensure universal access to safe surgery and anesthesia.

**International Organizations, including NGOs:**

- Raise public awareness about the importance of universal access to safe surgery and anesthesia, engaging communities and advocating for change.
- Facilitate knowledge sharing and collaboration among NGOs, NMOs, and healthcare professionals to leverage collective expertise and resources.
- Monitor and evaluate the impact of programs and initiatives to improve access to safe surgery and anesthesia and advocate for their scalability and sustainability.
- Serve as a voice for underserved communities and vulnerable populations, ensuring their needs and rights to safe surgical care, and anesthesia are addressed.

**Healthcare professionals and healthcare facilities to:**

- Advocate for policy changes prioritizing universal access to safe surgery and share knowledge and expertise with colleagues and healthcare professionals in low-resource settings to improve surgical outcomes globally.
- Embrace interdisciplinary collaboration to improve surgical care and anesthesia integration within healthcare systems.
- Contribute to developing and disseminating guidelines and best practices in surgical care and anesthesia to improve patient safety and outcomes.
- Stay updated with advancements in surgical techniques, anesthesia protocols, and patient safety measures to provide the highest quality of care.

**Medical Schools, Universities, Research Institutes and Journal Editors:**

- Improve and develop curriculums that advocate for social accountability and awareness on the issues of global surgery, highlighting the importance of universal access to safe surgery and anesthesia.
- Facilitate learning and production of globally competent health professionals equipped with skills and knowledge to improve surgical outcomes for their patients
- Encourage research among students to help contribute to the growing literature on global surgery.

**National Member Organizations (NMOs) and Health Students to:**

- Condemn all practices and protocols that compromise the integrity of human life during unsafe surgical procedures through national campaigns, activities, and projects;
- Advocate for more equitable access to surgical and anesthesiological care in their countries and organize events that promote this issue and its integration into mainstream health care;
- Advocate for the integration of global surgery into curricula and throughout undergraduate and postgraduate programs;
- Collaborate with multidisciplinary partners and organizations that promote global surgery or global health in their institutions.

## Position Paper

### Background information:

Universal health coverage (UHC) means that everyone has access to the complete range of high-quality health-care services they require, when and where they need them, and without financial hardship. It encompasses the entire range of vital health services, from health promotion to prevention, treatment, rehabilitation, and palliative care. Assuring access to safe surgery and anesthesia as part of universal health coverage can help the UHC goals be met. Global surgery is a critical cornerstone of global health. Global surgery aims to improve access to surgical care through studies and practices that allow faster, more affordable, and higher quality patient service. It focuses on strengthening horizontal health systems by emphasizing various health challenges in surgical care that improve health outcomes, especially in vulnerable groups. Global surgery is crucial when it comes to achieving the Sustainable Development Goals 2030 (SDGs) by addressing the elimination of poverty (SDG #1), ensuring good health and well-being (SDG #3), promoting decent work and economic growth (SDG #8), and reducing inequalities (SDGs #5 and #10). The focus areas of global surgery go beyond national borders and overlap with other global health matters, such as the COVID-19 pandemic and migration. It is essential to acknowledge that global surgery issues hold significant importance in global health and considerably impact health outcomes.

However, compared to other global health networks, the global surgery network has yet to receive significant attention and resources, despite indications of its significance. Global surgery can increase its efficacy by linking with health systems, strengthening agendas, and identifying solid solutions to improve access to quality surgical care in LMICs. Global surgery is vital to achieving health equity and well-being for all. Therefore, investing time and effort in advancing global surgery and global surgery-related outcomes is worthwhile and should be a priority for all healthcare policymakers.

### Discussion:

#### 1. Definitions

The objective of global surgery is to enhance access to surgical, obstetric, and anesthetic care on a global level. The objective can be attained by utilizing research, medical practice, and advocacy. Research has indicated differences, especially in low- and middle-income countries (LMICs). [1]

These issues were identified under the core components of Global Surgery: need, access and quality. As such, to reach the objective of universal access to safe surgery and anesthesia, the "need" of LMICs needs to be quantified reliably, and research needs to be done globally. There is a "relative paucity of data relating to access, capacity and quality in many resource-limited countries." [1] Effective advocacy needs evidence-based data to push for change in Global Surgery. Access is the other core component identified to work towards equitable surgical systems. The lack of access is often due to the following causes: "cost and economical factors, geographical location, services lacking sufficient capacity or sociocultural factors." [1] Finally, the quality of surgical care is crucial because increasing access without assessing quality might be more detrimental to the health of the populations and the economic well-being of LMICs [1]. Indeed, 4.2 million deaths worldwide are attributable to perioperative complications. This rate is more

than HIV, tuberculosis and malaria death rates [x]. In that sense, the perioperative mortality rate must indicate universal access to safe surgical and anesthesia care.

To monitor global surgical access, the Lancet Global Surgery Commission proposes a six-component indicator model which comprises "access to timely essential surgery, specialist surgical workforce density, surgical volume, perioperative mortality, protection against impoverishing expenditure, and protection against catastrophic expenditure." [1] Those indicators are meaningful only when interpreted together to help assess the state of the world in this issue. Thus, the Lancet Global Surgery Commission relies on those measures to push for targets in 2030 to bring the goal of equitable healthcare systems closer to its completion and make bellwether procedures (defined as cesarean delivery, laparotomy and treatment of open fracture and constitute essential surgical procedures [2]) more accessible to 80% of the population.

## 2. Impact of Lack of Access to surgical care

Most of the world's population doesn't have surgical care, and access is inequitably distributed. At least 4.8 billion people worldwide (95% posterior credible interval 4.6–5.0 [67%, 64–70]) do not have access to surgical services. The proportion of the population that cannot access varied widely when stratified by epidemiological region: greater than 95% of the people in South Asia and central, eastern, and western sub-Saharan Africa do not have access to care, whereas less than 5% of the population in Australasia, high-income North America, and Western Europe lack access" [3] The near absence of access in many middle-income and low-income countries represents a crisis, and not only because of the lack of care but also because of the complications that come with the lack of access to safe surgical care.

The second edition of *Disease Control Priorities in Developing Countries* [3] describes four types of surgical interventions that have a public health dimension:

- The provision of competent, initial surgical care to injury victims to reduce preventable deaths, as well as to decrease the number of survivable injuries that result in disability
- The handling of obstetrical complications, such as obstructed labor and hemorrhage
- The timely and competent surgical management of a variety of abdominal and extra-abdominal emergency and life-threatening conditions
- The elective care of simple surgical conditions, such as hernia, clubfoot, cataract, hydroceles, and otitis media

Therefore, in this section of the present document, we will review some of the many areas that suffer from lack of access to safe surgical care, such as pediatric surgery, obstetric, maternity and general adult care, which inevitably have higher rates of death, disability, loss of quality of life and poorer prognosis.

## 3. Adult Surgical Cares

The lack of surgical care takes a severe economic and human toll and can lead to acute, life-threatening complications. Thus, "deaths due to surgically treatable conditions are higher than those caused by HIV/AIDS, tuberculosis and malaria combined in low- and middle-income countries (LMICs)." [3] In other instances, poor-quality care results in chronic disabilities that make productive employment impossible and burden family members and society.

#### 4. Pediatric Surgical Cares

The scenario in the case of pediatric patients does not improve; in fact, "surgical conditions are common in pediatric patients, with up to 85% of those younger than 15 years being affected "[4]. Consequently, poor access also results in substantial morbidity and mortality. Moreover, the availability of surgical care is critical for infants, as congenital disabilities are now the 5th most common cause of death in children younger than five years.

As said before, congenital conditions require surgery early in the child's life to decrease the likelihood of morbidity and mortality and have a high incidence in many LMICs. A study published in 2019 estimated that 1.7 billion children globally do not have access to the primary, life-saving surgical care they need, which equates to 92.3% of children in lower-middle-income countries and 97.7% of children in low-income countries. The LCoGS estimates that 143 million additional surgical procedures are required annually, with 38% of these procedures necessary for children.[5]

The study, "*Global, regional, national, and selected subnational levels of stillbirths, neonatal, infant, and under-5 mortality, 1980–2015: a systematic analysis for the Global Burden of Disease Study 2015*", sought to assess and identify the leading causes of mortality in newborns, infants and preschoolers around the world. Among its findings, it noted that "overall neonatal mortality, mortality due to specific neonatal causes and congenital anomalies, and stillbirths declined moderately." However, these gains were mainly concentrated in higher-income countries, maintaining the gap with LMICs.[6]

Also, according to The Lancet Commission, the estimated number of adolescents and children without access to surgical care persists high. [5] The number is consistent with our experience in many low-income countries, where surgical care for children has been a low priority and often excluded from child health programs. Further, because children develop different surgical problems from adults and often require specialized care, the actual number without access could be even higher.

The fact that "during the first 8000 days of life, surgical care can reduce the short- and long-term suffering associated with congenital anomalies, traumatic injuries, and childhood malignancies amenable to surgery" [7] highlights the fundamental significance of having safe surgical care in this age range. Furthermore, "early surgical treatment of disabling conditions can enable children to pursue an education, which directly influences a child's overall development, and can improve a child's survival chances." [7] Additionally, surgical care can contribute to the accomplishment of specific health-related sustainable development goals and targets, including:

- Preventing preventable deaths in newborns and children under the age of five;
- Lowering the death and disability rate from noncommunicable diseases and traffic accidents;
- Ensuring universal health coverage;
- Expanding the health workforce.

So, without improvements in surgical and anesthetic pediatric care, achieving the second sustainable development goal number 3 won't be possible: ending preventable deaths of newborns and children younger than five years. [8]

#### 5. Maternal and Obstetric Surgical Cares

Proper surgical care in this area is as crucial for the mother as it is for her child. This is why there is a double negative outcome when they are absent. A difference in the leading causes of under-five mortality has been described in high-income countries. However, it is essential to mention that the leading causes of death among under-fives are complications of premature birth (18 percent), pneumonia (12 percent), birth-related complications (8 percent) and sepsis (7 percent). Both causes related to maternal and

obstetric areas (premature birth and birth-related complications) should be addressed and prevented by safe access to surgical care.[9,10]

In addition, 10-15% of pregnancies will require emergency obstetrical care and maternal deaths are considerably higher in LMICs, with a rate that can reach 100 times that of high-income countries. [11]

In conclusion, by ensuring everyone has access to timely, safe, and affordable surgery, we can prevent disability, save many lives, and foster economic growth.

## **6. Assessing the state of inequity of surgical and anesthesia access**

The Lancet Commission for Global Surgery emphasizes its scope on LMICs. Indeed there is an undeniable inequity in safe surgical and anesthesia care access when comparing low- middle-income countries (LMICs) and high-income countries (HICs) [2] given that of the 266 million operations performed in a year worldwide, only 3.5% are done in LMICs.

Those inequities are also seen in care capacity since LMICs often report fewer than one operating theater per 100 000 inhabitants, while higher-income countries have more than 14 per 100 000 [1]. Some regions are even more affected than others, namely sub-Saharan Africa (with 93% of people with no access to safe surgery) and Southeast Asia (with 97% of people who have access to primary and safe surgical care) [12]. Furthermore, those inequities are more exacerbated in remote regions of LMICs where access to bellwether procedures is quasi-null [2]. In higher-income countries, the inaccessibility to safe surgery in remote areas can also be witnessed and constitutes a significant factor in the inequity in healthcare systems. Furthermore, this lack of access affects vulnerable populations even more. For example, Indigenous people from high-income countries experience considerable disparities in surgical care [13].

The differences in quality and safety of care post-operatively are also shocking. Indeed, the death rate after significant surgery is 5-10% in LMICs. In high-income countries, the rate is 1-2%. [14] Gender inequities are relevant in this context as cesarean sections are the most commonly performed surgery worldwide. However, maternal death rates are considerably higher in LMICs, with rates that can reach 100 times the ones of high-income countries [12].

Finally, anesthesia is a core component of good quality and humane surgery. Indeed, pain is considered the fifth vital sign, and decreasing chronic pain is crucial in keeping a population healthy. However, there is a considerable inequity between high-income countries and LMICs in opioid analgesic access. The six highest-income countries are responsible for 79% of the world's morphine consumption, while lower-income countries only account for 6% [15].

## **7. The importance of ethical partnership in reaching universal access to surgery**

In the era of globalization of healthcare, the availability of resources in high-income countries (HICs) gives them an advantage in understanding the complexity of the health systems. While there are efforts by HICs to identify and bridge existing gaps in Global Surgery, data-driven policies must be developed and implemented in LMICs to ensure sustainable improvement in the core tenets of Global Surgery. However, developing publications in the field were mainly from HICs, leading to inefficient development in universal access to surgical care and challenges in ethical partnerships. A scoping review showed that only four articles per country were published from institutions in the LMICs compared to the 44 articles per country led by authors from HICs. [16,17]

While these pieces of literature ultimately contribute to crafting and improving policies, local resources from these LMICs may need to be diverted to less urgent surgical missions. It gravely affects the sustainability of the guidelines that may be made and patient care, which can be counterproductive to the advocacy. Continuity of care may be compromised as physicians conducting surgical missions from

HICs are there only temporarily. Moreover, the cultural variation, including social, religious and linguistic differences, poses a challenge in obtaining informed consent and the standard of care for patients. These may serve as barriers to the transference of the knowledge and skills in performing these activities that are vital in improving the quality and accessibility of surgical services.

## 8. Incorporation into Medical Education

Lack of capacity to perform necessary surgery, with increased waiting times, leads to increased risks of death and disability. In addition, low surgical volumes reduce providers' skills, negatively impacting patient safety and, at the same time, making it challenging to attract and retain surgeons.

The significance of safe surgery and anesthesia care has recently received widespread global acknowledgment. The World Health Organization (WHO) started the Safe Surgery Saves Lives campaign, which emphasized the value of standardized surgical techniques and the contribution of teamwork to better patient outcomes.[18] Similarly, the Lancet Commission on Global Surgery stresses the importance of timely, safe, and inexpensive surgical care as an integral part of the global healthcare system.[18,19]

Safe surgery entails using standardized protocols, adhering to infection control procedures, performing an accurate preoperative assessment, using effective surgical techniques, and providing thorough postoperative care to reduce risks and consequences. [20] anesthesia care includes:

- Administering anesthesia.
- Keeping an eye on the patient.
- Controlling discomfort.
- Reducing hazards during surgical procedures.

Both vocations demand technical expertise and specialized knowledge. [21] Medical schools and training programs ensure that students develop a strong foundation in quality care, preparing them to provide high-quality care and address the challenges associated with surgical interventions and anesthesia administration by incorporating or admitting these topics into the medical curriculum. Medical education is crucial in developing competent healthcare professionals in safe surgery and anesthesia care.[22]

The ideas and practices of safe surgery and anesthesia must be incorporated into medical education for universal access to these types of care to be realized. We should investigate the implications of including safe surgery and anesthesia in medical curricula, emphasizing the value of adequate healthcare, increased patient care, improved surgical results, and global health equity.

- **Affordable medical treatment**

Including universal access to safe anesthesia and surgery in medical education curricula promotes egalitarian healthcare concepts.[23]

By doing this, medical students become more aware of the variations in surgical and anesthetic services among various populations and geographical areas. They understand the significance of ensuring everyone has equal access to safe surgical treatments and anesthetic care, regardless of socioeconomic level, geography, background, etc. It aids in forming future healthcare professionals that support just healthcare systems.[24]

- **Improved Surgical outcomes**

When safe surgery and anesthetic care are incorporated into medical curricula, it directly impacts surgical outcomes by emphasizing improved surgical outcomes. (McQueen et al., 2015) Medical



students get knowledge on how to reduce risks, avoid complications, and guarantee the best possible patient results. Through it, students thoroughly understand preoperative evaluations, intraoperative procedures, and postoperative care, improving surgical outcomes. Incorporating these ideas enables medical students to develop into highly competent surgeons and anesthesiologists dedicated to providing their patients with top-notch treatment[25]

- **Improved medical treatment**

Medical students are taught to address patients holistically when creating treatment plans and overseeing postoperative care, considering surgical and anesthesia-related variables. They recognize the value of patient-centered treatment, clear communication, and collaborative decision-making. [26] By incorporating safer surgery and anesthesia principles into medical curricula, healthcare education developed kind healthcare professionals who prioritize patients' security, comfort, and general well-being. [27]

- **Equity in global health**

Students in the medical field learn about the difficulties that underprivileged communities encounter, such as limited access to surgical facilities, the lack of qualified healthcare workers, and poor infrastructure.[28] Students are encouraged to pursue initiatives that advance global health equity through their education, such as participating in medical missions, conducting research, and advocating for legislative changes to increase access to secure surgical and anesthesia services in settings with limited resources.

- **Cooperative and sustainable strategy**

Medical students are taught to collaborate with surgeons, anesthesiologists, nurses, and other healthcare professionals in interdisciplinary teams. They know the value of collaboration, clear communication, and shared accountability in providing safe and thorough surgical treatment. [29]. Additionally, the curriculum promotes cost-effective solutions, reduces waste, and maximizes resource use to build a sense of responsibility for sustainable healthcare practices. [30,17]

## **9. Standard Anesthesia Indicators and their application as a predictive value for Safe Anesthesia in Global Health**

Safe Anesthesia is vital to surgical care to ensure successful patient outcomes. It's crucial to have reliable indicators to forecast Safe Anesthesia administration in global health settings where resources may be scarce. [31]

It's crucial and valuable to examine the importance of common anesthesia indicators and how they can be used to forecast Safe Anesthesia in this setting. Healthcare practitioners can improve patient safety, optimize anesthetic care, and make educated decisions by recognizing these indicators and their implications.[32]

Patients with surgical operations are given anesthesia to ensure comfort, pain management, and immobility.[33] But, other risks come with anesthesia, like problems, unfavorable side effects, and drug mistakes.[34] The safety and effectiveness of anesthesia care are evaluated using defined metrics known as standard anesthesia indicators. These indicators cover various topics, such as anesthesia provider training, patient monitoring, medication administration, and the availability of necessary tools and supplies. [35,36]

Using common anesthetic indicators becomes essential in global health contexts where access to healthcare resources may be constrained. These indicators are helpful tools for evaluating how prepared and equipped healthcare facilities are to deliver safe anesthesia. Healthcare professionals can adopt targeted interventions and manage resources efficiently to improve patient safety and optimize anesthesia services by recognizing gaps and shortcomings in anesthesia care. [37,38,39]

In global health settings, employing common anesthetic indicators as predictive metrics for safe anesthesia is crucial.[40] These indicators offer a framework for evaluating the quality and safety of anesthesia care, enabling medical professionals to recognize potential risks and implement the necessary countermeasures. [37]They are designed to offer anesthesia professionals, professional associations, hospital and facility administrators, and government guidance and assistance in maintaining and enhancing anesthesia care's standard of living and safety. Healthcare institutions can improve anesthetic outcomes in resource-constrained environments by following these indicators. They can also improve patient safety and resource usage.

The use of common anesthetic indicators has several benefits. They serve as a starting point for comparing current anesthesia methods to accepted norms, standards, and best practices. This guarantees that anesthesiology professionals follow safety guidelines consistently, regardless of the surroundings or available resources. [40]. Second, by making data collection and analysis more accessible, these indicators enable tracking trends, adverse events, and outcomes associated with anesthesia. This knowledge can direct efforts to improve the quality and point out problems that need fixing or teaching. [41, 42]

Standard anesthesia indicators offer a valuable strategy for guaranteeing secure anesthesia in global health settings where access to advanced monitoring technologies and specialist anesthesia training may be constrained. [39] Healthcare facilities can effectively prioritize their limited resources by concentrating on essential factors like professional aspects, facilities, patient monitoring, anesthesia, provider qualifications, medication management, and availability of critical equipment.[43, 44] By focusing efforts where they are most needed, this focused strategy improves patient outcomes and safety.

Safe anesthesia is essential for effectively completing surgical procedures in global health settings. Even if many indicators are used to monitor anesthesia, the precise standard may change based on the hospital, geography, and available resources [45]. While providing safe surgical and anesthetic care, we have attempted to present some often utilized anesthesia indicators with their general applications. According to many academic publications, there must be a commonly acknowledged gold standard collection of markers to track the caliber of perioperative treatment thoroughly. [46]

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IFMSA International Secretariat, Nørre Allé 14, 2200 København N., Denmark