SHE CAN DO IT

Engage. Empower. Excel

ISSUE [NO.25]
BEYOND BORDERS: EXPLORING GLOBAL SURGERY, EQUITY AND HEALTH CHALLENGES BETWEEN WORLDS

Released December, 2024. RCSI AWS Student Chapter presents 'She Can Do It' - a magazine dedicated to marginalised physicians who have made an impact in the world of medicine and surgery.

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WELCOME

Hello SCDI readers!

We are so happy you're here.

The AWS team have created this bimonthly newsletter in hopes of bringing about a comforting, informative, and inspiring place for you to dive into different topics relating to the field of medicine. SCDI features a wide range of article styles, including information-led, opinion, and expert interviews. We also encourage submissions from you, our dear readers. Take advantage of this platform to share your perspectives and hone your writing and communication skills, which are crucial to being a great physician.

What's in store this month?

In a world where there is increasing connectivity between nations, health disparity between countries remains stark. While advanced surgical care is available in high-income countries, billions of people in low- and middle-income regions face limited or no access to essential services. This divide presents as more than a health crisis— it poses a moral and economic challenge that underscores the profound inequities dividing our world.

This article provides a comprehensive analysis of how factors such as geography, economics and culture can impact access to basic surgical care. We hope that the topics covered in this article are thought-provoking and inspiring, and challenge us all to aspire for change.

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GLOBAL *SURGERY*

WHAT IS GLOBAL SURGERY?

Global surgery is a field dedicated to improving access to safe, timely, and affordable surgical care worldwide. Despite the life-saving potential of surgical interventions, a staggering 5 billion people lack access to safe surgical care, according to the Lancet Commission on Global Surgery (2015). Additionally, an estimated 143 million more surgical procedures are needed annually to meet global health demands. These alarming statistics underscore the urgent need for a concerted effort to address the inequities in surgical care, particularly in low- and middle-income countries (LMICs).

The disparities in surgical care in LMICs are profound. Many regions face inadequate infrastructure, limited access to surgical training programs, and high out-of-pocket costs for patients. These barriers not only hinder the provision of essential surgical services but also exacerbate existing health inequities. The goals of global surgery are ambitious yet necessary: ensuring that 80% of the population can access surgical care within two hours of need, reducing financial catastrophes due to surgical expenses, and achieving universal access to anaesthesia and skilled surgical professionals.

RCSI X GLOBAL SURGERY

The Royal College of Surgeons in Ireland (RCSI) has positioned itself as a key contributor to advancing global surgery through innovative programs and partnerships. A cornerstone of their efforts is the collaboration with the College of Surgeons of East, Central, and Southern Africa (COSECSA). This partnership focuses on training surgeons in LMICs, developing curricula, and providing online resources to support surgical education and practice in resource-limited settings.

The RCSI Institute of Global Surgery furthers these efforts by conducting research aimed at strengthening health systems in LMICs. The Institute's projects target critical areas such as improved trauma care and expanding access to obstetric and laparoscopic surgery. These initiatives not only improve immediate surgical outcomes but also lay the foundation for sustainable health system enhancements.

Students at RCSI are also encouraged to engage with global surgery through the Global Surgery Pathway. This program offers electives, research opportunities, and outreach activities designed to foster early interest in the field and prepare the next generation of global surgeons. By involving students, RCSI ensures that the values and objectives of global surgery will continue to be championed by future medical professionals.

THE FUTURE OF GLOBAL SURGERY

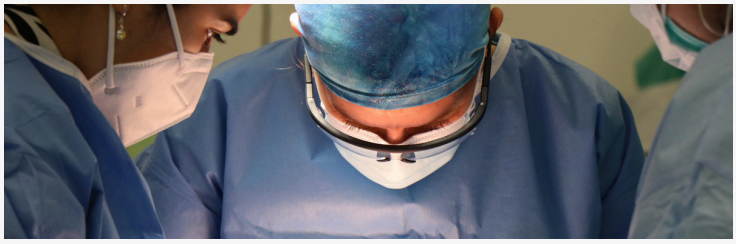
The future of global surgery is poised to benefit from technological innovations and strategic collaborations. Advances such as telemedicine and 3D printing are revolutionizing the delivery of surgical care in remote and underserved areas. Simulation-based training is also becoming increasingly popular as a cost-effective way to enhance surgical skills, particularly in LMICs where resources are limited.

However, significant challenges remain. Sustainable investment in infrastructure and workforce training in LMICs is critical to ensuring long-term progress. Additionally, robust policy advocacy is needed to promote equitable surgical access and address systemic barriers to care. Global partnerships will play a crucial role in building capacity, sharing knowledge, and addressing the disparities that persist in surgical care.

By addressing these challenges and capitalizing on emerging opportunities, the field of global surgery can make significant strides toward a future where safe, timely, and affordable surgical care is a reality for all.

Access to surgery: Infrastructural barriers

Access to **essential surgery** is influenced by several factors ranging from economical, structural and geographical. Presence of hindering factors leads to LMIC having **higher death rates** for conditions that are otherwise easily addressed through surgery. In this article, we hope to **explore** some of those challenges, while comparing **statistical differences** between nations.



Economic

Insufficient funding: Taking a look at the per capita health expenditure in 2022, we can see stark differences in expenditure on healthcare between HIC vs LMIC. Where countries such as the US and Ireland had expenditures of 12,555 and 6,046 (USD) per capita respectively, India and Peru had an expenditure of 212 and 759 per capita. Both India and the US predominantly have private healthcare and private insurance. India saw a steep increase in private healthcare from 5-10% to 86% post independence of British rule in 1947. In the US, more people have private health insurance (65.6 percent) than public coverage (36.1 percent).

Global health prioritisation: Infectious diseases receive 40% of global health funding, non-communicable diseases (NCDs) receive a shy 1.8 percent globally. The primary treatment for many NCDs, including cancers, cardiovascular disease, trauma and obstetric complications is surgical management. Lack of funding for surgical care in LMIC means the mortality rate for these manageable conditions remains high.

Structural

Lack of facilities: Many countries have a limited number of hospitals which are capable of providing surgical services, particularly in rural areas. Afghanistan has fewer than 5 surgical hospitals per million people compared to Ireland's robust hospital network. Ireland offer 16.54 hospital per million people

Poor workforce: Lack of trained surgeons, anesthetists, and surgical nurses ensures surgical procedures cannot go ahead. This may be due to barriers to education, facilities or even cultural barriers. WHO estimates that at least 2.5 medical staff (physicians, nurses and midwives) per 1,000 people are needed to provide adequate coverage with primary care interventions (WHO, World Health Report 2006) as prioritized by the Millennium Development Goals framework. In 2019, the World Bank Group reported that in HIC there were 36 physicians per 1000 physicians, whereas LMIC had 1.3 per 100 people.

Geographical Factors

Rural-Urban Divide: Urban areas typically have better surgical facilities, while rural regions are underserved. In India for example, rural areas face a lack of basic surgical care, while urban centers like Mumbai have world-class hospitals.

Transportation Barriers: Poor infrastructure limits patient access to hospitals.

Natural Disasters and Conflict: These disrupt access to surgical care by damaging infrastructure or displacing populations. Syria's ongoing conflict has decimated its healthcare infrastructure. This means that although the conflict has caused an increase in morbidity, there is a fundamental lack of surgical care to address healthcare concerns.

Access to surgery: Individual barriers

Personal Financial Barriers

Out-of-pocket (OOP) expenses refer to the direct payments made by patients for healthcare services that are not covered by insurance or public health systems. These costs can encompass fees for consultations, surgical procedures, hospital stays, medications, diagnostic tests, and follow-up care.

Many low- and middle-income countries (LMICs) lack comprehensive health insurance systems, leaving patients responsible for a significant portion of their healthcare expenses. Public healthcare facilities often face resource shortages, leading patients to seek care in private hospitals, which tend to be more expensive.

Awareness and Health Literacy

Lack of Knowledge

Many patients, particularly in rural or underserved areas, lack awareness of their medical conditions and the benefits of surgical intervention. This knowledge gap stems from low health literacy, inadequate access to healthcare information, and limited interactions with trained medical professionals.

Lack of awareness leads to challenges in the following ways:

Recognition of Symptoms: Patients often fail to recognize symptoms that indicate a surgical condition (e.g., hernias, appendicitis, or cancer).

Understanding the Benefits of Surgery: Surgical interventions may be misunderstood or seen as invasive and unnecessary unless the condition is life-threatening.

Dependence on Traditional Practices: In many communities, traditional healers or herbal remedies are the first line of care. These approaches, while culturally ingrained, often delay the recognition of the need for surgical treatment.

Fear and Misinformation

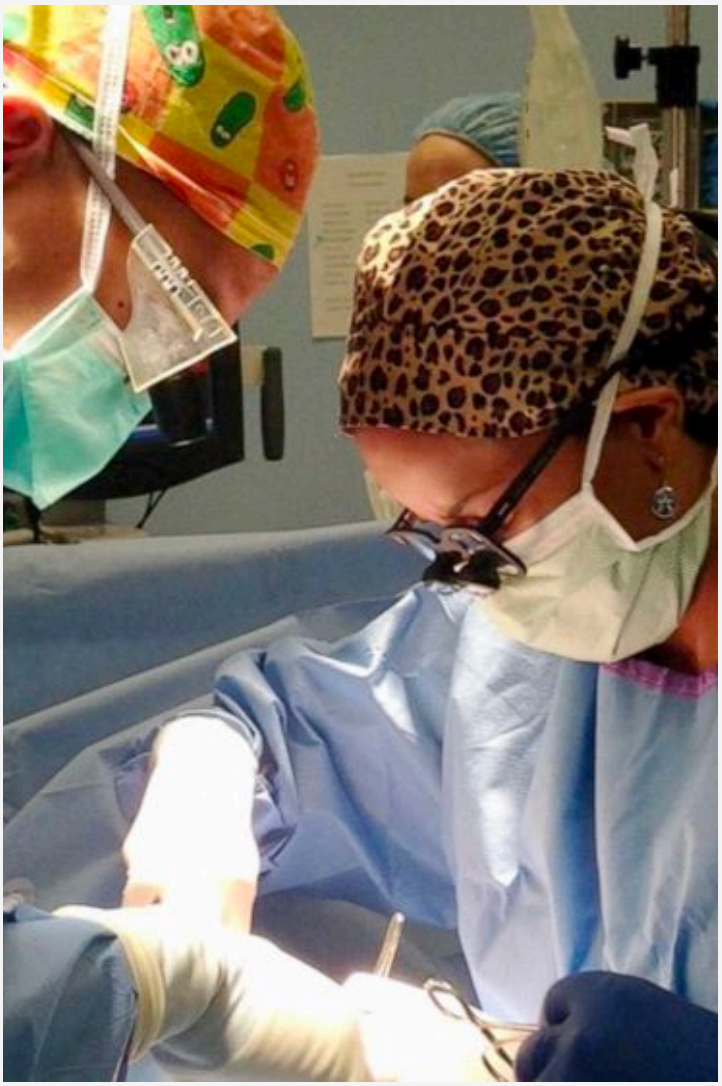
Fear and misinformation are major barriers to surgical care, as they create distrust and apprehension about seeking help from the healthcare system. This fear is often rooted in past experiences, cultural beliefs, or insufficient communication from healthcare providers. Cultural Beliefs can often act as a source of misinformation. In some cultures, surgery is associated with body harm, spiritual loss, or loss of dignity. This can lead to resistance against seeking surgical interventions. In regions with underfunded or corrupt healthcare systems, patients may believe that surgeries are unnecessary or that medical professionals prioritize profit over patient welfare.

CULTURAL BIASES IN GLOBAL SURGERY

Culture has always had major influences on the expected responsibilities of men and women in society. While these cultural norms have evolved over time, there is still a vastness in the perceived norms of different regions depending on geographic and socioeconomic characteristics.

In **high income countries** such as the United States, women are now enrolled in colleges at a higher rate than men. This pattern is further reflected in medical schools as over 50% of medical school applicants and students in both schools of osteopathic and allopathic medicine are women. However, in spite of these rather encouraging statistics, women continue to remain underrepresented in surgery. The **dichotomies** of male-dominated and female-dominated specialities are **perpetuated by the underlying associations of men in the workforce and females in the home.** Specialities dominated by men are viewed as more prestigious and powerful and while also consistently having higher salaries. Women are highly represented in fields such as obstetrics and gynaecology, family medicine, and paediatrics. An article about Dutch medical students found vastly different motivators that influenced specialty choice in male and female students. Male students often sought specialities with high status, increased opportunities for technical work, and high salaries, while female students were often influenced to choose specialities based on their own altruism. Therefore, female students chose specialities such as general practice that emphasise continuous and individualised care, while surgical specialities were predominantly chosen by men

The causes of this phenomenon are multifaceted. While overt discrimination has reduced significantly, **subtle discriminatory patterns continue to plague** the female medical professional experience. Firstly, when accounting factors such as specialty, number of working hours, and qualification, a gender wage gap of over $16,000 exists in the United States.



Such challenges can be further amplified for women of minority backgrounds who may face further financial and social discrimination.

Furthermore, cultural and social norms in middle and lower income countries further amplify these experiences. Women are expected to place greater emphasis on their **roles as homemakers** than their professional development, resulting in limited extrinsic support of women in pursuit of fields that are often dominated by men such as surgery. Women in the medical field are instead perceived as nurses or staff, further perpetuating stereotypes about the female role in medicine.

Maymona Choudry, MD, MPH shared her experience as a surgical resident in the Philippines stating,

'From my experience as being the team leader, there are certain times during rounds when patients direct their questions and concerns to my male juniors instead of me. This kind of discrimination happens everyday in the life of women surgeons-in-training. It's like we have to prove ourselves everyday, even though we become senior residents and excel in certain aspects of surgical residency training'

Additionally harassment and discrimination continue to plague female students, often discouraging them from pursuing surgical careers. A study conducted in Pakistan on female surgeons found that 42.9% of women experienced gender discrimination but only 19.4% reported their experiences. Similarly, while 53% of female surgical residents experienced gender discrimination, a mere 19% reported their experiences in the United States. A study conducted by Cochran at el, found that women experience gender discrimination at a rate 10 times greater than their male colleagues. While few women chose to report their experiences of gender discrimination, this may illustrate a worrying trend of what is considered 'normal' in the female surgical resident experience. In low and middle income countries the lack of regard for gender bias and discrimination in surgery may be a larger contributor to the lack of achievement and recognition of gender equity.

Additionally, in low income countries, systemic challenges further contribute to the difficult pursuits of female medical students including institutional biases in their selection into surgical residency programs. The lack of female representation in such a male dominated industry, particularly in leadership roles, continues to have a domino effect. It has historically been exceptionally challenging for women to access surgical qualification opportunities despite their credentials and experiences. This lack of representation reinforces an absence of diversity in the decision making among surgical training institutions, further exacerbating a homogenous training cohort, often resulting in narrow-minded approaches to policy and the delivery of healthcare.

Women in lower, middle, and higher income countries continue to face widespread barriers in the pursuits for surgical training and practice. While the experiences of women vary based on the intersectionality of economic, geographic, and social position, the fundamental fact remains the same: women continue to remain underrepresented in surgery. The American Medical Association has emphasised the cruciality of analysing these systemic barriers based on characteristics such as working hours, specialty, advancement opportunities and income. Furthermore, it is vital that women continue to rise in roles of leadership within surgery to ensure that the cyclical cycle of gender discrimination and biases is disseminated. Such progress must be made at a greater pace to ensure that future generations of surgical residents no longer experience what many female students consider to be an unfortunate norm all around the world.

Bridging the Divide:

Advancing Equity and Addressing Health Challenges in Global Surgery through Missionary Work

Missionary organizations have long played a vital role in addressing disparities in global health, particularly in the field of surgery. Their work is centered around offering **care in underserved regions, training local healthcare workers**, and fostering **cross-cultural collaboration.**

This article explores how missionary efforts contribute to closing the gap in global surgery, the challenges encountered, and the strategies needed to ensure sustainable impact.

The Global Challenge of accessible surgery

Over 5 billion people worldwide lack access to safe, affordable, and timely surgical care, with the majority residing in low- and middle-income countries (LMICs) (Meara et al., 2015). Missionary organizations have stepped in to provide essential services, such as cleft palate repairs, cesarean sections, and trauma surgeries, addressing life-threatening conditions that might otherwise go untreated.

For example, in rural sub-Saharan Africa, missionary surgeons have performed thousands of procedures in facilities where no surgical care previously existed. By offering these services at little or no cost, missions have transformed lives and communities.

Addressing Health Inequities through Missionary Work

Missionary efforts often operate in resource-poor environments where healthcare infrastructure is limited or nonexistent. These missions address disparities in surgical care by:

- **Providing Direct Care** - Mobile surgical units and mission hospitals perform complex surgeries in remote locations, saving lives in regions where local facilities cannot meet the demand.
- **Building Local Capacity** - Training programs for local healthcare workers are integral to the long-term success of missionary initiatives. For instance, missionaries at a hospital in Uganda implemented a training program for nurse anesthetists, which significantly improved surgical outcomes and reduced reliance on external teams.
- **Advocating for Equity** - Missions often work alongside governments and non-governmental organizations to advocate for improved access to surgical care as part of national health policies.

Cultural Sensitivity and Challenges in Missionary Global Surgery

Cultural **understanding** is crucial for the success of missionary surgical efforts. In many communities, **misconceptions about surgery can lead to fear and resistance**. Missionaries address these barriers through collaboration with local leaders and integration of cultural practices into care delivery models.

For instance, in a Central American mission, local healers were engaged to educate the community about the benefits of surgical interventions, resulting in increased acceptance and earlier treatment-seeking behavior.

Strategies for Sustainable Impact

Focus on Training: Providing education and hands-on training for local healthcare workers ensures that skills remain in the community long after the mission concludes.

Infrastructure Development: Partnering with local governments and organizations to build and equip surgical facilities can create lasting change.

Culturally Sensitive Partnerships: Building trust and understanding through collaboration with local leaders fosters community acceptance and engagement.

Leveraging Innovation: Introducing low-cost technologies, such as solar-powered sterilization units or portable laparoscopic kits, can overcome resource constraints.

Stories of Transformation

In a remote hospital in East Africa, a missionary surgical team worked alongside local staff to perform over 500 life-saving procedures in a single year. Beyond the surgeries themselves, the mission established a training program for mid-level healthcare providers, who now manage the majority of surgical cases independently.

Similarly, in Southeast Asia, a mission group collaborated with local universities to develop a curriculum for surgical nursing. This initiative not only increased the workforce capacity but also elevated the status of nursing as a profession in the region.

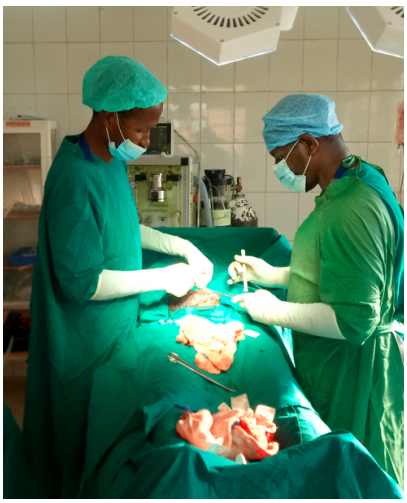
In conclusion , Missionary efforts in global surgery demonstrate the transformative potential of compassion and collaboration. By addressing inequities, providing care, and building local capacity, these missions bring hope and healing to some of the world's most underserved populations. However, to ensure their impact is lasting and ethical, missionaries must focus on sustainability, cultural humility, and empowering local systems.

WOMENS HEALTH AND GLOBAL SURGERY

Access to obstetric and gynaecological healthcare is vital in the reduction of morbidity and mortality. Maternal health, particularly maternal mortality rates vary vastly across the globe based on accessibility and predominant social and cultural norms. Obstetric surgeries such as Cesarean sections are crucial interventions in maternal health, and the disparities in access to such procedures looks drastically different in high income and low income countries.

Cesarean sections and emergency obstetric care (EmOC) play a key role in the management of complex childbirths. EmOC is a branch of medicine that involves cesarean sections, eclampsia management, and blood transfusions, which can reduce pregnancy complications and maternal mortality. Currently, cesarean sections are increasing in prevalence all around the world, accounting for over 20% of all births.

Such a procedure is vital, and can be lifesaving for both the mother and child when vaginal delivery is not possible. In low income regions such as sub-saharan Africa, approximately 5% of women undergo Cesarean sections. Compared to the global rate, this disproportionately low statistic highlights the lack of accessibility to such a life-saving procedure. Cesarean sections are predicted to continue to rise in popularity over the next few years, as it is predicted that by 2030 they will account for 63% of all births in Eastern Asia, 54% in Latin America and the Caribbean, 48% in Northern Africa, and 47% in Southern Europe. The rise in Cesarean sections is likely driven by health policy, financial accessibility, cultural practices, and the quality of accessible healthcare.



An essential facet of reducing maternal mortality and morbidity lies in efficiency and accessibility to OBGYN care. The World Health Organization states that 88-98% maternal deaths can be prevented through increased access to effective and adequate quality obstetrics care, further emphasising the necessity for quality Cesarean sections across low and middle income countries

Rates of Cesarean sections in high income counties average 29.6% based on the distribution of qualified medical professionals and the structure of the healthcare system. Professionals such as obstetricians and anaesthesiologists who play a key role in the safe and timely surgeries are highly accessible members of the workforce in such countries. In low and middle income countries, accessibility to skilled care is limited as a result of systemic barriers including poverty and a poorly developed healthcare infrastructure that often lacks skilled professionals that can perform obstetric procedures.

A multifaceted contribution of factors results in disparities between high income and low to middle income countries.

The Three-Delay Model, created by Thaddeus and Maine, indicates three major delays and socioeconomic barriers affecting accessibility to female obstetric care. The three delays are, “delay in deciding to seek care, delay in reaching a healthcare facility, and delay in receiving timely and appropriate care upon arrival.” Socio economic barriers such as poverty and cultural barriers may also induce complications such as preterm labour or the development of hypertension. Additionally, under-resourced healthcare systems in low and middle income countries can amplify disparities in care. In these countries there is a ratio of 0.7 surgical (anesthesiological, obstetrical) providers to 100,000 people in the population which contrasts drastically to high income countries that have a ratio of 56.9 providers for every 100,000 people in the population.

The lack of surgical equipment, anaesthesia, and blood supplies contributes to the overall lack of healthcare and obstetrical infrastructure in these regions.

Inequities in access to obstetric surgery affect maternal and perinatal health outcomes. Maternal mortality rates in high income and lower income countries depict the stark inequalities that prevail in various regions of the globe. In Sub-Saharan Africa women experienced the highest risk of mortality as a result of a complication related to pregnancy at 1 in 40 childbirths.

Womens health and global surgery

Factors such as hypertensive disorders, obstructed labour, and postpartum haemorrhage can often have fatal consequences without access to surgical intervention. Insufficient access to obstetric care can result in increased rates of neonatal death and stillbirths as 2.65 million deaths occur each year and many may be as a result of decreased quality of maternal healthcare. In low and middle income countries, adolescent pregnancy further contributes to the reduction in perinatal and obstetrical outcomes.

Adolescent pregnancy results in 26% of all deaths among females aged 15-19 in Africa, and 15% of all maternal mortality cases worldwide.

Improving global maternal outcomes requires a multifaceted approach. To begin, it is vital to improve healthcare infrastructure in low and middle income countries through the establishment of more EMoC Facilities and widespread training and disbursement of obstetricians, particularly in rural areas. The Global Surgery Foundation's Women's Health Programme has been established to "provide safe, timely and respectful Cesarean section care to improve maternal and perinatal outcomes". Furthermore, financial remediation, such as the equalisation of the cost of Cesarean sections and vaginal births can reduce birthing complications in low and middle income populations.

Moreover, systemic change must also encompass public awareness to shift the prevalent social norms. Public education campaigns may be used to educate high risk populations about complications that may arise during pregnancy and the risks associated with delayed access to care.

Access to safe and timely OBGYN care is vital in improving rates of maternal morbidity and mortality across the globe. The inequities of access to lifesaving reproductive healthcare demonstrate the dichotomies of the healthcare system in high income and low income countries and the resulting consequences that affect millions of women each year.

Surgical Differences Between HICs LICs: A Global Perspective

Surgery is an integral component of healthcare, addressing conditions that contribute to a significant portion of the global burden of disease. However, the landscape of surgical care varies drastically between high-income countries (HICs) and low-income countries (LICs). This article explores these differences, highlighting the most common surgeries, demand, barriers, and opportunities to bridge the gap.

GLOBAL TRENDS & RISING DEMAND

Surgical trends worldwide reflect regional healthcare priorities and resource availability. In LICs, caesarean sections dominate, accounting for approximately 30% of all surgeries, followed by inguinal hernias at 16.4% and laparotomies at 5.1%. On average, only 877 surgeries are performed per 100,000 population annually in LICs, far below the Lancet Commission on Global Surgery's (LCoGS) benchmark of 5,000 surgeries per 100,000 population by 2030. In contrast, HICs demonstrate higher surgical volumes with advanced and elective procedures. For instance, in 2022, cataract surgery was the most common procedure in the EU, performed 4.73 million times, followed by caesarean sections at 1.1 million cases. Other frequent surgeries in HICs include cholecystectomies, knee replacements, appendectomies, hysterectomies, and mammary gland excisions. Regional differences highlight LICs' focus on emergency procedures such as trauma surgeries and obstetric/gynaecological operations, while HICs prioritize elective procedures, cancer surgeries, joint replacements, and transplants.

The demand for surgery is growing globally, with the number of annual surgeries increasing by 38% between 2004 and 2012, from 224 million to 313 million. LICs experienced the largest surge at 114%, yet only account for 6% of global surgical procedures. Diseases requiring surgical intervention contribute to 30% of the global disease burden. Despite advanced surgical options in HICs, underserved areas still face disparities. LICs, on the other hand, struggle to meet even basic and emergency surgical needs, leaving a significant portion of their populations without access to critical care.

A Global Perspective

BARRIERS

Several barriers impede surgical access in LICs. Infrastructure deficits, such as inadequate operating rooms, sterilization facilities, and unreliable power supplies, are a primary challenge. Workforce shortages are another critical issue, with limited numbers of trained surgeons, anaesthetists, and nursing staff. This problem is exacerbated by "brain drain," where healthcare professionals emigrate to HICs seeking better opportunities. Financial constraints further limit access, as high out-of-pocket costs deter patients in LICs, where health insurance coverage is often minimal or non-existent. High incidences of trauma, infections, and maternal emergencies add to the disease burden. Additionally, a significant technology gap restricts access to advanced imaging, minimally invasive techniques, and robotic systems, further hindering effective surgical care.

BRIDGING THE GAP

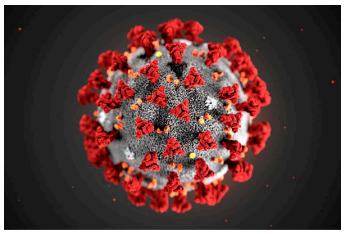
Addressing these challenges requires a multifaceted approach. Investing in infrastructure to build and equip surgical facilities in LICs is essential. Expanding local surgical training programs and creating incentives for healthcare professionals to remain in their home countries can address workforce shortages. Financial reforms, such as advocating for universal health coverage and increasing global funding for surgical care, can alleviate financial barriers. Technology sharing, including affordable access to advanced surgical technologies and promoting telemedicine and remote training initiatives, can help bridge the technology gap. Strengthening global collaborations is also crucial. Partnerships between HIC and LIC institutions, such as RCSI's collaboration with the College of Surgeons of East, Central, and Southern Africa (COSECSA), exemplify the potential for impactful international cooperation.

ROOT CAUSE

These differences arise from economic disparities, inequities in healthcare funding, global health system imbalances, and cultural factors that influence healthcare-seeking behaviours. Economic inequalities between HICs and LICs lead to significant differences in healthcare infrastructure and resource distribution. Healthcare funding in LICs often prioritizes basic health needs over surgical advancements, leaving critical gaps in care. Supply chain issues and unequal resource distribution exacerbate these challenges, while cultural and social factors can deter individuals in LICs from seeking timely surgical care.

While the differences in surgical care between HICs and LICs are stark, targeted investments and international collaboration can bridge the gap. By addressing infrastructure, workforce, financial, and technological disparities, the global healthcare community can move closer to achieving equitable surgical care for all.

COVID-19 AND GLOBAL SURGERY



Challenges, Impacts, and the Road to Recovery

The COVID-19 pandemic disrupted healthcare systems worldwide, with its effects felt acutely in the field of global surgery. Elective surgeries were postponed, surgical training programs were halted, and already limited resources in low- and middle-income countries (LMICs) were redirected toward pandemic management. These disruptions exposed vulnerabilities in surgical care systems and highlighted the urgent need for resilient global surgery frameworks.

This article explores the challenges faced by global surgery during the pandemic, its long-term impacts, and strategies for recovery and future preparedness.

At the height of the pandemic, elective surgical procedures were suspended in many countries to prioritize critical COVID-19 cases and conserve resources such as ventilators and personal protective equipment (PPE). A study by the COVIDSurg Collaborative estimated that over 28 million elective surgeries were canceled or postponed globally in the first 12 weeks of the pandemic (COVIDSurg Collaborative, 2020). For LMICs, where surgical backlogs were already significant, these delays have had devastating consequences for patients requiring time-sensitive interventions.

Emergency surgeries, though prioritized, faced significant challenges during the pandemic. Patients often delayed seeking care due to fear of infection or travel restrictions, resulting in worsened outcomes. For instance, delays in managing appendicitis, obstetric emergencies, and trauma cases led to increased morbidity and mortality, particularly in resource-poor settings.

Healthcare resources, including operating theaters, ICU beds, and healthcare personnel, were diverted to COVID-19 care. This reallocation disproportionately affected LMICs, where surgical capacity was already limited. Many hospitals in these regions were forced to close operating theaters, further exacerbating surgical inequities.

The pandemic also disrupted surgical training programs worldwide. Cancelation of elective cases reduced trainees' exposure to essential procedures, while travel restrictions limited international training opportunities. Virtual learning and simulation-based training were introduced as alternatives, but these solutions often excluded trainees in LMICs due to limited internet access and technological infrastructure.

COVID-19 AND GLOBAL SURGERY

Challenges, Impacts, and the Road to Recovery

Lessons Learned and Strategies for Recovery

The pandemic underscored the importance of robust and adaptable surgical systems. Governments and global health organizations must prioritize investments in surgical infrastructure, workforce training, and supply chain resilience to ensure preparedness for future crises.

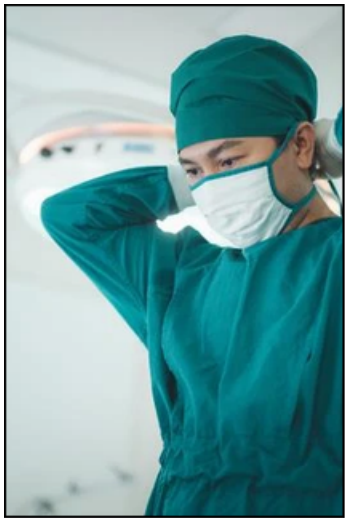
Telemedicine and digital health technologies emerged as vital tools during the pandemic. Expanding these technologies to include tele-surgical consultations and virtual training can help bridge gaps in access and education, particularly in LMICs.

Clearing the backlog of postponed surgeries requires coordinated efforts, including prioritizing high-risk cases, optimizing operating room efficiency, and leveraging task-sharing models. Collaboration between HICs and LMICs can facilitate resource sharing and technical support.

For LMICs, resilience building must focus on strengthening health systems through sustainable investments. Initiatives such as the World Health Organization's (WHO) Global Surgery Program and regional collaborations can provide frameworks for capacity building and resource allocation.

As a society we have also grown in our aptitude for supporting Healthcare Workers. Mental health support for surgical teams is essential. Implementing counseling services, providing adequate rest periods, and fostering supportive work environments can help mitigate burnout and retain skilled professionals.

We have improved our knowledge sharing abilities as seen through the the pandemic fostering unprecedented global collaboration in healthcare., strengthening global surgery initiatives and advancing research.



The COVID-19 pandemic exposed significant vulnerabilities in global surgery, particularly in LMICs. However, it also highlighted opportunities for innovation, collaboration, and resilience building. By prioritizing investments in surgical systems, embracing technology, and fostering global partnerships, the global health community can mitigate the pandemic's long-term impacts and ensure that surgical care is accessible to all, regardless of geography or socioeconomic status.

ADDRESSING UTERINE PROLAPSE IN LMIC: VAGINAL HYSTERECTOMY AS A SOLUTION

By: Iria Manas Miramontes

The World Health Organization estimates that around 300,000 women died in 2017 due to pregnancy-related complications, with significant disparities in maternal health outcomes between high-income countries and low- and middle-income countries (LMIC) (Roser & Ritchie, 2024). Beyond obstetric emergencies, gynecological health challenges like uterine prolapse severely impact the quality of life and maternal health outcomes for millions of women, especially in resource-limited settings. While obstetric care and caesarean sections have been prioritized in LMIC health agendas, gynecological surgical techniques addressing uterine prolapse remain underfunded and underutilized. One such technique—vaginal hysterectomy for advanced uterine prolapse—has the potential to improve the quality of life, prevent complications, and save lives in LMIC if implemented strategically.

Evidence of Need

Uterine prolapse, a condition where the uterus descends into or beyond the vaginal canal, has a higher prevalence in LMIC due to risk factors like prolonged labor, high parity, and poor access to postpartum care (Chen & Thompson, 2020). Most women with uterine prolapse cases remain untreated due to social stigma and lack of resources. If left untreated, uterine prolapse can lead to chronic pain, urinary incontinence, infections, sexual dysfunction, and depression, significantly impairing women's quality of life.

In advanced cases, complications such as ureteral obstruction or ulceration of prolapsed tissue may result in life-threatening conditions. Despite the burden of this disease, gynecological surgical interventions like vaginal hysterectomy are rarely prioritized in LMIC, mainly due to perceived costs and lack of trained personnel.

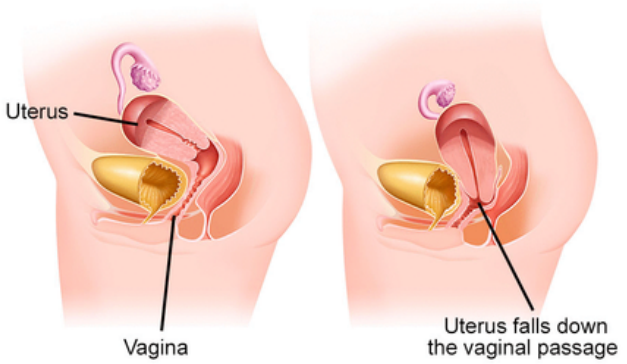


Photo 3: Uterine prolapse, Healthdirect

The Value of Vaginal Hysterectomy

Vaginal hysterectomy is an optimal surgical intervention for low- and middle-income countries (LMICs) due to its safety, cost-effectiveness, and minimal resource requirements. It significantly enhances the quality of life for women with advanced uterine prolapse by alleviating associated symptoms, improving mobility, and restoring psychological well-being, thereby reducing the socioeconomic burden on families (Pillarisetty & Mahdy, 2023). The procedure's minimally invasive nature eliminates the need for abdominal incisions, leading to reduced postoperative complications, shorter hospitalizations, and faster recovery—benefits that are particularly valuable in resource-constrained settings. Economically, the approach is viable as it requires limited specialized equipment and can be executed through community-based mobile surgical camps. Furthermore, task-shifting models that train mid-level healthcare providers can expand access to this life-changing procedure. By preventing complications such as infections and renal damage, vaginal hysterectomy contributes to substantial long-term healthcare cost savings. When integrated into broader maternal health initiatives, this scalable technique can address critical gaps in women's healthcare, improving outcomes on a systemic level.

ADDRESSING UTERINE PROLAPSE IN LMIC: VAGINAL HYSTERECTOMY AS A SOLUTION

Surgical Technique

Vaginal hysterectomy involves the surgical removal of the uterus via the vaginal canal, commonly performed for conditions like uterine prolapse when the uterus is easily accessible through the vaginal route. The procedure begins under spinal anesthesia, chosen for its safety profile and cost-effectiveness, with the patient positioned in the lithotomy posture. A circular incision is made around the cervix to access the uterus. The uterosacral and cardinal ligaments are then sutured and divided to free the uterus from its supporting structures. Subsequently, the uterus is carefully separated from adjacent tissues and extracted through the vaginal outlet. To address associated pelvic floor relaxation, concurrent reconstructive procedures such as anterior or posterior colporrhaphy are often performed. The surgery concludes with the closure of the vaginal vault, a critical step in minimizing the risk of future prolapse. Compared to abdominal hysterectomy, vaginal hysterectomy offers significant advantages, including shorter recovery times, lower complication rates, and high success rates. These attributes make it a particularly effective and resource-efficient intervention for managing uterine prolapse in low-resource settings.

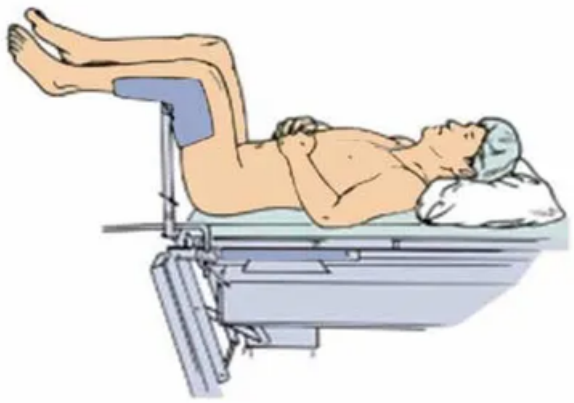


Photo 2: Patient in lithotomy position during gynecological procedure (Seladi-Schulman, 2018)

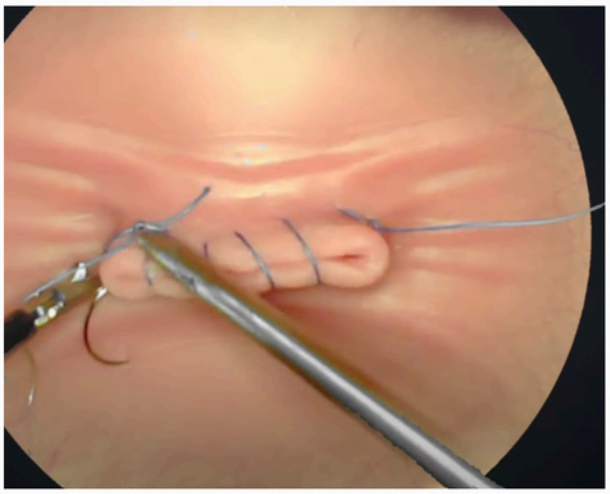


Photo 3: Vaginal vault suturing after vaginal hysterectomy (Vault, 2023)

Implementation in LMIC

To successfully integrate vaginal hysterectomy as a viable solution for uterine prolapse in low and middle-income countries (LMICs), several strategies should be pursued:

Training Mid-Level Practitioners

Exposing general practitioners and nurses to vaginal hysterectomy through simulation training and supervised practice with skilled surgeons can significantly expand the healthcare workforce capable of performing this procedure. This addresses the shortage of specialized personnel in rural areas, where access to gynecologists and surgeons is often limited. Training programs tailored to LMICs should incorporate low-cost simulation models and intensive mentorship to build local capacity. This strategy ensures a sustainable solution by decentralizing surgical expertise and empowering mid-level practitioners to deliver life-saving care.

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Surgical Outreach Programs

Establishing mobile surgical clinics can help deliver vaginal hysterectomy services in regions where permanent health facilities are scarce. These outreach programs can operate on a rotational basis, bringing specialized care directly to underserved areas. By integrating such programs into broader health initiatives, surgical outreach can also facilitate postoperative follow-ups and provide community education. This approach reduces geographical and financial barriers, ensuring that women in remote settings can access treatment for uterine prolapse.

Community-Level Interventions

Addressing the social stigma and misinformation surrounding uterine prolapse is critical for encouraging women to seek medical care. Community education programs can raise awareness about the condition, available treatments, and the benefits of vaginal hysterectomy. Engaging community health workers to disseminate culturally sensitive information and facilitate early identification of cases can lead to higher treatment uptake. These interventions not only empower women to prioritize their health but also create a supportive environment that normalizes seeking care for reproductive health issues.

Integration into Existing Maternal Health Programs

Incorporating vaginal hysterectomy into the existing maternal health infrastructure leverages already available resources, making this intervention cost-effective. By using existing facilities, staff, and logistical systems, LMICs can minimize additional investment while addressing a significant health need. For example, hospitals and clinics already equipped for maternal health services can easily integrate vaginal hysterectomy into their offerings, streamlining patient care and reducing duplication of resources.

By implementing these complementary strategies, LMICs can significantly expand access to vaginal hysterectomy, improving reproductive health outcomes for women while addressing systemic healthcare challenges.

Conclusion

Vaginal hysterectomy for treating uterine prolapse represents a transformative solution to a prevalent yet underserved health issue in LMICs. This procedure not only improves individual health by enhancing quality of life and reducing complications but also strengthens healthcare systems through cost-effective, scalable interventions. Implementing vaginal hysterectomy as part of maternal health programs empowers women, reduces inequities in global health, and bridges critical gaps in reproductive healthcare. With adequate funding and strategic implementation, this initiative has the potential to create lasting change for millions of women worldwide.

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