



# Bridging the Surgical Divide: Addressing Access, Safety, Volume and Financial Burden in Mexico's Healthcare System through Global Surgery Research

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In 2008, Paul Farmer and Jim Yong Kim first referred to surgery as the "neglected stepchild of global health".<sup>1</sup> Their powerful statement highlighted the critical neglect of surgical care within the global health agenda, emphasizing the urgent need for greater attention and resources. Today, this issue remains acutely relevant in Mexico, where inadequate investment, the risk of catastrophic expenditures, and limited surgical capacity continue to compromise the health and economic stability of millions. Surgical diseases remain a major cause of death and disability, particularly among the poor.

The Lancet Commission on Global Surgery (LCoGS) estimated in 2015 that 5 billion people worldwide lack access to safe and affordable surgical care.<sup>2</sup> Most of those lacking access live in low- and middle-income countries (LMICs) like Mexico. While 73% of the world's population resides in LMICs, only 6.3% of surgeries are performed in these regions.

The need for improvement in Mexico's surgical system is clear. Nearly 15 years after the LCoGS publication of five key messages, six core indicators, and numerous recommendations, there remains a significant gap in practical understanding and implementation within the Mexican surgical community. The core indicators for monitoring universal access to safe and affordable surgical and anesthesia care are still not widely understood or consistently reported in Mexico.

The proportion of the population with timely access to essential surgery in Mexico has been measured at 81.7%.<sup>3</sup> However, given the country's large and complex geography, this figure varies significantly, with some areas having an estimated coverage as low as 53%. Although the national average exceeds the 80% benchmark set by the LCoGS, merely having a facility within two hours of travel is not sufficient to ensure safe and effective surgical care. A sufficient surgical workforce, adequate case

volume, and financial protections are all indispensable. In the last five years, the Mexican government has rehabilitated and reopened a total of 61 hospitals and 129 health facilities with aims to enhance healthcare access for the most underprivileged populations. However, an assessment of the distribution of these health facilities and their impact on surgical care access in the coming years is necessary.<sup>4</sup>

The surgical workforce density indicator was set at 20 surgical, anesthetic, and obstetric (SAO) physicians per 100,000 population by the LCoGS. Estimates for Mexico vary, with some sources indicating approximately 10 SAO physicians per 100,000 population, which is significantly below the target. Other sources, however, report a higher figure of 40.2 per 100,000. This indicator is closely correlated with surgical volume, which is challenging to measure accurately in Mexico due to the fragmentation of the health system and inconsistent reporting in the private sector. In 2023, 33,116 physicians joined the Mexican public health network. Of these, 58% were assigned to second and third-level health facilities, where surgical care frequently takes place. However, only 5.4% were medical specialists, indicating an even smaller percentage of SAO physicians.<sup>4</sup> Surgical volume in the public system is estimated to be between 1,335 and 3,000 procedures per 100,000 population, falling short of the 5,000 procedures per 100,000 population goal set by the LCoGS.<sup>5,6</sup>

Regarding financial protection, in Mexico, out-of-pocket healthcare expenditures account for approximately 41% of the total health expenditure. Some evidence suggests that financial catastrophe from surgical care can be more common in middle-income countries than in low-income countries, because the cost of surgery, as a function of income is higher in middle income countries, and as the financial status of a country improves, the costs of surgical care and its associated non-medical



expenses may increase more rapidly than average household income.<sup>7</sup> The population at risk in Mexico of impoverishing expenditure due to out-of-pocket costs for surgical care is estimated to be 7%, equating to around 9 million people who may be pushed into poverty when surgical care is needed.<sup>8</sup>

Despite progress, it is clear that the country still face significant challenges in providing safe and affordable surgical care to its population. Global Surgery research plays a crucial role in improving surgical systems by identifying needs, developing cost-effective and environmentally friendly solutions, enhancing training, building capacity, improving data collection, promoting collaboration, and advocating for policy changes.

The health and economic benefits of expanding access to safe and effective surgical care are substantial. We need increased investment, better reporting, health systems research, and a more unified health system. The surgical community can no longer remain on the sidelines of global public health. We must be part of a major shift in thinking and understand that global surgery research and collaboration are essential to addressing inequities in surgical access. Surgical societies must move beyond the traditional model of knowledge transfer and fully integrate global surgery into their mission. It is imperative for all stakeholders - healthcare providers, policymakers, and researchers - to join forces and commit to advancing global surgery on local, regional or global scales. By doing so, we can make access to safe and affordable surgical care a reality for everyone. Our collective efforts are best directed towards answering questions and implementing interventions that have a significant impact on patients. Only through collaboration we can transform surgical care, bridge the gap between haves and have-nots, and improve the lives of millions.

## References

1. Farmer PE, Kim JY. Surgery and global health: a view from beyond the OR. *World J Surg* 2008; 32: 533–36.
2. 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.
3. Pérez-Soto RH, Trolle-Silva AM, Valdés GAB, et al. Timely access to essential surgery, surgical workforce, and surgical volume: global surgery indicators in Mexico. *Glob Health Sci Pract* 2023; 11: e2100745.
4. INSABI Secretaría de Salud. Informe de resultados al 2023. Transformación del sector salud de México, 2019–2024. <https://www.gob.mx/insabi/articulos/informe-de-resultados-al-2023-334661?state=published> (accessed on Aug 3, 2024).
5. Weiser TG, Haynes AB, Molina G, et al. Size and distribution of the global volume of surgery in 2012. *Bull World Health Organ* 2016; 94: 201–09F.
6. 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.
7. Shrimpe MG, Dare AJ, Alkire BC, O'Neill K, Meara JG. Catastrophic expenditure to pay for surgery worldwide: a modelling study. *Lancet Glob Health* 2015; 3 Suppl 2: S38–44.
8. World Bank. Risk of impoverishing expenditure for surgical care (% of people at risk) – Mexico. <https://data.worldbank.org/indicator/SH.SGR.IRSK.ZS?locations=MX> (accessed on Aug 3, 2024).