





## **Factors Limiting the Lifetime Impact of Surgical Training**

Lionel Dumont, MD, PD\*†; Anne Zeidan, M.Phil†; Pierre Quinodoz, MD†‡

Cai et al<sup>1</sup> suggested that training reconstructive surgeons could significantly reduce the burden of surgical needs in low- and middle-income countries (LMICs), with the potential to impact up to 400,000 cases over a surgeon's career. Although we agree that surgical training is a crucial, sustainable solution, focusing solely on it without addressing broader systemic issues risks overestimating its potential. Several critical factors can considerably diminish the anticipated impact.

First, the absence of state-supported universal health coverage severely limits access to reconstructive surgery in disadvantaged populations.

Second, an inadequate infrastructure is a major challenge. Trained surgeons require access to fully functional operating rooms, which are often scarce or underresourced in LMICs. These facilities not only need appropriate surgical tools and technologies but also a reliable supply of essential medical resources and support from healthcare professionals such as anesthesiologists, nurses, and paramedics.<sup>2</sup> The absence of these key elements severely hinders the potential of even the most highly trained surgeons.

Third, the workload of African surgeons—encompassing case load, teaching responsibilities, on-call duties, and administrative tasks—is recognized as one of the heaviest in the world. This factor is known to impact surgeons' performance and may serve as a limiting factor in their development as practitioners and educators.<sup>3</sup>

Fourth, there is the potential risk of a shift toward "cosmetic-only" practice, which would lead to an underutilization of reconstructive surgery skills for populations most in need. However, we must also argue that the model of diversified and resilient plastic surgery, which includes both cosmetic pay patients and reconstructive surgery patients, as well as charity care, could thrive in Africa and contribute to the retention of surgeons in the country.

From the \*Department of Anesthesiology, Department of Acute Medicine, Geneva University Hospital, Geneva Switzerland; †Department of Operations, Second Chance Association, Geneva, Switzerland; and ‡Department of Plastic Surgery, La Tour Hospital, Geneva, Switzerland.

Received for publication September 24, 2024; accepted December 12, 2024.

Copyright © 2025 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal. Plast Reconstr Surg Glob Open 2025; 13:e6518; doi: 10.1097/GOX.0000000000000006518; Published online 10 February 2025.

Indeed, the phenomenon of brain drains, namely, the migration of skilled professionals from LMICs to high-income countries, persists as a substantial challenge. Even if this phenomenon is currently overestimated, <sup>4</sup> surgeons who have undergone advanced training may be drawn to more opportunities abroad, where they can access superior facilities, higher remuneration, and enhanced career prospects. This ultimately constrains the availability of skilled professionals in the regions where they are most needed.

To maximize the impact of surgical training, we must broaden the scope beyond surgeons. The training of nurses, anesthesiologists, and other medical personnel is essential for building cohesive and effective surgical teams. Without a strong support team, surgeons cannot operate at their full potential.

Furthermore, these training efforts must be coupled with comprehensive health policies that address the underlying structural deficiencies in LMIC healthcare systems. Governments and international organizations must work together to improve surgical infrastructure, promote digital tools,<sup>5</sup> establish universal health coverage, and provide incentives to retain surgeons within their home countries, ensuring their skills are used where they are most needed.

If these issues are not addressed, the projected impact of 400,000 cases per trained surgeon will be significantly reduced. A more holistic approach that tackles these limitations alongside training initiatives is crucial for achieving the lasting, meaningful impact that Cai et al envision.

Lionel Dumont, MD, PD

Department of Anesthesiology, Department of Acute Medicine, Geneva University Hospital, Geneva Switzerland E-mail: alpamayo98b@gmail.com

## **DISCLOSURE**

The authors have no financial interest to declare in relation to the content of this article.

## REFERENCES

- Cai L, Meyers N, Chang J. Modeling the lifetime impact of reconstructive plastic surgery training: implications for building capacity in global surgery. *Plast Reconstr Surg Glob Open*. 2024;12:e5577.
- Osebo C, Grushka J, Deckelbaum D, et al. Assessing Ethiopia's surgical capacity in light of global surgery 2030 initiatives: is there progress in the past decade? Surg Open Sci. 2024;19:70–79.
- Podda M, Di Martino M, Pata F, et al; LIONESS Study Group. Global disparities in surgeons' workloads, academic engagement and rest periods: the on-calL shIft fOr geNEral SurgeonS (LIONESS) study. *Updates Surg.* 2024;76:1615–1633.
- Hutch A, Bekele A, O'Flynn E, et al. The brain drain myth: retention of specialist surgical graduates in East, Central and Southern Africa, 1974-2013. World J Surg. 2017;41:3046–3053.
- Ali YH, Alandejani T. Rhinoplasty assisted by endoscopic septoplasty: precise job and an educational tool. J Craniofac Surg. 2020;31:847–850.