

Embrace innovation and redefine South African surgery

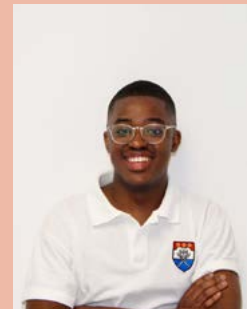
SF Ndereya

University of Cape Town, South Africa

Corresponding author, email: sfndereya@gmail.com

Authors's biography

I am a fifth year MBChB and Global Surgery Research student at the University of Cape Town, an outgoing member of the UCT Surgical Society Executive Team and a South African Global Surgery Society Student Representative. I am interested in General Surgery as well as Obstetrics and Gynaecology. I am still undecided about which specialty to pursue; my focus is on getting as much exposure to as many disciplines and opportunities as possible during my time as an undergraduate student. I plan to incorporate research into whatever path I choose. I am particularly interested in Global Surgery discourse, with financing of health systems and surgical care systems strengthening as my favoured themes. I hope to have a career that allows me to merge my interests and contribute to South African healthcare. In my spare time, I enjoy gardening, running and playing jazz music.



Introduction

Since the 2015 publication of the World Bank's third edition of their Disease Control Priorities (DCP-3),¹ the Lancet Commission on Global Surgery² and the World Health Assembly (WHA) Resolution 68.15,³ surgical care has been recognised as part of the foundation of global health.² Although global surgery discourse has become more widespread since 2015, there is uncertainty as to whether its adoption is beneficial to a surgical system like South Africa's. Two questions have been posed: "Is surgical innovation mutually exclusive or mutually inclusive?" and "Can we truly invest in surgical innovation throughout the second largest continent before we make sure South Africa has the requisite basic surgical services?" These questions have the same answer: quality surgical care for all requires innovation; global surgery is that innovation. This conclusion is reached by answering several questions: "What is the current state of the South African surgical system?", "Is innovation necessary?" and "Is global surgery truly innovative?"

What is the current state of the South African surgical system?

South Africa is infamously known as one of the most unequal countries in the world with a Gini coefficient of 0.65 in 2015.⁴ This inequality is evident in the South African surgical system where a 2018 review of the number of functional operating theatres found 1 969 functional operating theatres, where 54% of these were in the private sector which serves 16% of the population and 46% were in the public sector.⁵ The distribution of theatres was found to favour urban areas. Gauteng and the Western Cape had the greatest theatre density (5.5 and 5.01 per 100 000 respectively) while

Limpopo had 1.44 theatres per 100 000.⁵ Overall South Africa had a functional theatre density of 3.59 per 100 000 total population.⁵

Slow service delivery in rural areas is a well documented barrier to access to health services.⁵ Many South Africans migrate to metropolitan areas in search of basic healthcare.⁵ While the review reported 1 969 functional operating theatres, the actual number of existing theatres was over 2 000. Reported common reasons theatres were not in use were: non-functional anaesthetic machines, lack of surgical supplies and lack of theatre staff (nurses, anaesthetists and surgeons).⁵ There is no global recommendation for the optimal number of operating theatres, but lower income countries (LICs) have disproportionately low volumes of surgeries.⁶ With the low number of functional operating theatres in the public healthcare system, one can infer that fewer surgeries are being performed. This has a detrimental effect on access to surgical care.⁵

The review proved that there are still parts of South Africa without access to essential surgical services and suggested the surgical system needed several investigations and interventions to address barriers to quality perioperative care.⁵

Is innovation necessary?

In order to achieve a healthcare system that offers quality accessible surgical care to all, the South African surgical system requires investigation, intervention and advocacy. Theatre demand and supply need to be aligned in a manner that maximises theatre utilisation, ensures staff availability, optimises patient selection and surgical bed utilisation in all theatre complexes.⁷ Surgical efficiency and capacity must be investigated by measuring surgical volumes and utilisation rates.⁵ Zambia and Tanzania are the only two

countries in the Southern African Development Community (SADC) that have developed National Surgical Obstetrics and Anaesthesia Plans (NSOAPs).⁸ South Africa has no NSOAP. Surgery (specifically cataract surgery) is mentioned once in the South African Department of Health's National Strategic Plan 2015/2016–2019/2020.⁹ Clinicians, politicians, academics, patients and economists need to advocate for adequate representation of perioperative care in Africa. The notion that surgical care is “too complex, too expensive”¹⁰ or that it has a “limited role to play”¹⁰ in treating the burden of disease must be rejected as South Africa adopts the idea that surgical care contributes to the foundation of every health system as emergency and elective procedures contribute to the health of all populations.

Is global surgery innovative?

Innovation is defined as “a new idea, device or method” or “the act or process of introducing new ideas”.¹¹ The WHO says that health innovation improves efficiency, effectiveness, quality, safety, sustainability and/or the sustainability of healthcare.¹² This definition of health innovation includes new and improved health systems, practices, services, technologies or products. “Simply put, the ultimate goal of health innovation is to improve our ability to meet public and personal healthcare needs and demands by optimising the performance of the health system.”¹²

Global surgery describes a rapidly developing multidisciplinary, multisectoral field that works to provide improved and equitable surgical care to the world's population with the core tenets of need, access and quality.¹³ This definition of global surgery mirrors the WHO definition of health innovation.¹² While the pursuit of providing quality surgical care is not a modern innovation, global recognition of surgery as an integral part of healthcare is. This ideological renaissance was catalysed by the 2015 publication of the Lancet Commission on Global Surgery, Disease Control Priorities² and the World Health Assembly Resolution.³ Society's recent embrace of global surgery has led to better understanding that the equitable provision of quality surgical care can only be achieved through collaboration amongst politicians, economists, patients and clinicians at local, national and international levels.⁸ The adoption of the global surgery tenets should be recognised as particularly novel and necessary to South Africans because past oppression, segregation and disproportionate allocation of resources has created an unequal society that has left many South Africans without access to safe and affordable surgical care.⁵

Conclusion

The current surgical system needs to change. South African theatres are placed in a geographically disproportionate manner, hence they are unable to serve certain parts of the population.⁵ Surgical system status quo of the nation and the continent must be redefined, this requires innovation. Global surgery offers that as its definition captures the goals of health innovation. The investigations, interventions and advocacy done in the name of global surgery work towards providing

quality perioperative care to patients and populations that require it. Therefore, surgical innovation and global surgery are synonymous and mutually inclusive in the context of ensuring access to basic surgical services.

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