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Invited Commentary

An Invited Commentary on: Emergency and essential surgical healthcare services during COVID-19 in low- and middle-income countries: A perspective


ARTICLE INFO

Keywords:

COVID-19

Low- And Middle-Income Countries

surgery

global health

personal protection equipment

Ma and colleagues [1] report on the impact of the Coronavirus (COVID-19) pandemic in low- and middle-income countries (LMICs), providing recommendations to mitigate the repercussions of COVID-19 and to prepare future communities for forthcoming crises. Worldwide COVID-19 has led to the indefinite postponement of surgery, limited surgical clinics and caused great demands on surgical healthcare resources [2]. It is clear, that even the most stable and robust surgical health care systems are struggling to cope with the ever-increasing demands of COVID-19 [2]. However, Ma et al. highlights the need to reflect on the even more profound impact that COVID-19 could have on the already strained and under resourced healthcare systems in LMICs. Ma et al. describes the potential impact of COVID-19 on LMICs including the difficulty in maintaining a surgical workforce, struggling with limited resources and being unable to protect the welfare of their surgical healthcare professionals [1].

During COVID-19, many healthcare systems have reallocated surgical staff to the emergency frontline and intensive care units (ITUS) to overcome the burden of the pandemic, providing surgical care only for emergency surgery [2]. Before, COVID-19, the Lancet Commission on Global surgery advised that to meet the global burden of surgical pathology, 100% of LMICs would need at least 20 surgical and anaesthesiologists per 100,000 population [3]. It is clear that deployment of surgical staff from the operating rooms in LMICs will have devastating consequences on maintaining emergency and essential surgical care delivery [1]. Coupled with the even less accessible personal protection equipment (PPE) in LMICs, the ability to maintain a surgical workforce further diminishes [1].

The need for specialist equipment including ventilators and ITU beds to treat those affected with COVID-19 effectively has been concern both in Europe and the United States [2]. However, Ma et al., emphasizes that in LMICs such resources are even more limited [1]. Recent studies show that LMICs Sub-African countries have less than 5 ICU beds per 100,000 population [4], which is far less than overrun countries such as Italy with 12.5 beds per 100, 000 population [5].

Ma et al., outlines four key recommendations to potentially overcome the potential challenges in LMICs [1]. Firstly, ensuring a collective knowledge in the community will help prevent surges in COVID-19 cases including the importance of social distancing and understanding when to seek appropriate care [1]. Following surgical body guidelines to cancel elective procedures to free up space and surgical staff to aid in the pandemic [2]. To maximize their limited surgical workforce by ensuring they are adequately trained to treat patients with COVID-19 [1]. Lastly, to take measures to protect their surgical providers by maximising PPE and considering innovative low-cost safe measures to re-use equipment [1].

In summary, while surgical healthcare is overwhelmed world-wide during the COVID-19 pandemic, it is particularly at risk in LMICs [1]. Maximising the LMICs limited surgical workforce through adequate PPE, cultural changes and focused training will be of vital importance to saving both patients and healthcare professionals [1].

Provenance and peer review

Invited Commentary, internally reviewed.

DOI of original article: <https://doi.org/10.1016/j.ijssu.2020.05.037>

<https://doi.org/10.1016/j.ijssu.2020.06.009>

Received 28 May 2020; Accepted 2 June 2020

Available online 09 June 2020

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References

- [1] X. Ma, et al., Emergency and essential surgical healthcare services during COVID-19 in low- and middle-income countries: a perspective, *Int. J. Surg.* 79 (2020 Jul) 43–46 2.
- [2] A. Al-Jabir, A. Kerwan, M. Nicola, et al., Impact of the Coronavirus (COVID-19) pandemic on surgical practice - Part 1 (Review Article) [published online ahead of print, 2020 May 11], *Int. J. Surg.* S1743–9191 (20) (2020) 30405-2.
- [3] J.G. Meara, A.J. Leather, L. Hagander, et al., Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development, *Lancet* 386 (9993) (2015) 569–624.
- [4] X. Ma, D. Vervoort, Critical care capacity during the COVID-19 pandemic: global availability of intensive care beds [published online ahead of print, 2020 Apr 23], *J. Crit. Care* 58 (2020) 96–97.
- [5] I. Carvalho, 'Our country needed help:' Italy's only ventilator 291 maker works round the clock (and at cost) in coronavirus fight, *Fortune*, Published March 21 <https://fortune.com/2020/03/21/italy293ventilator-maker-siare-engineering-coronavirus-prime-minister/>.

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