

# Effects of the COVID-19 pandemic on delivery of emergency surgical care in India

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Dear Editor

The COVID-19 pandemic and subsequent global lockdowns led to a drastic fall in the number of operations performed. To reorganize healthcare facilities and workforce management, elective surgeries were deferred indefinitely at the beginning of pandemic. This affected emergency operations as well<sup>1</sup>. The World Bank, in the third edition of *Disease Control Priorities*, has grouped some of these emergency operations as 'essential', implying that they need to be performed to avert 1.5 million deaths globally per year<sup>2</sup>. Caesarean births, exploratory laparotomies and fracture fixation surgeries are considered bellwether procedures when surgical care delivery is considered. Intensive care facilities were either used or reserved for patients with COVID-19 infection, further limiting surgical care. A research consortium led by the WHO Collaboration Centre for Research in Surgical Care Delivery in Low- and Middle-Income Countries, India, conducted a multicentre surgical audit to quantify the reduction in emergency operations and Bellwether procedures in India. A total of 4396 surgeries were performed at these centres in April 2019, compared with 1216 in April 2020. Emergency and elective operations were reduced by 54 and 91 per cent respectively. Caesarean sections were the least affected of all essential operations, and were reduced by 29.7 per cent. Fracture surgeries were reduced by 85.3 per cent. Laparotomies and operations for local soft-tissue infections with necrotic tissue were reduced by 71.7 and 69.5 per cent respectively.

The COVIDSurg Collaborative had predicted that 72 per cent of all surgeries would be cancelled owing to the pandemic, and cancellation of elective surgeries for a 12-week period was estimated to be 80 per cent<sup>1</sup>. These figures are comparable to those found in the present study. The reduction in emergency operations may be attributed to resource diversion to the care of patients with COVID-19 infection, as well as lockdowns leading to poor access to healthcare establishments. The fear of acquiring COVID-19 may also have played a part. The ongoing pandemic has transformed the global surgical systems to 'limited resource environments', leading to only emergency surgeries

being performed. This has left advanced and elective surgeries in a lurch.

There are no Indian studies to compare or externally validate these observations regarding the overall reduction in emergency operations. Similar studies, however, showed a reduction in surgical volume during the Ebola epidemic in Africa<sup>3</sup>. Caesarean section was least affected, as it is likely the most 'inevitable' procedure. A study from Sierra Leone documented a similar 40 per cent reduction in caesarean sections during the initial period of the Ebola epidemic<sup>4</sup>. The proportionally greater drop in operations for fractures and trauma was likely due to a lockdown-enforced reduction in vehicular movements, and thus accidents. In addition, other common indications for laparotomy such as appendicitis and cholecystitis may have been managed conservatively. Restricted access to hospitals and the consequent reduced footfall and admissions still remains the most likely reason for the reduction in total surgeries. Requirements of contingency planning for surgical services during the ongoing pandemic have been described previously<sup>5</sup>.

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