



Health system assessment for safe surgical care in rural Nicaragua: a retrospective survey

Neema Kaseje, Jordan Swanson, Isobel Marks, Vincent Were, Sabine Siddiqui, Faye Evans, Emily Smith, Dan Poenaru, Emmanuel Ameh, Kokila Lakhoo, Keith Oldham, Diana Farmer, Doruk Ozgediz

Abstract

Published Online
March 15, 2018

Global Initiative for Children's Surgery, Managua, Nicaragua (N Kaseje); Children's Hospital Los Angeles, Los Angeles, CA, USA (J Swanson); Barts and the London School of Medicine and Dentistry, London, UK (I Marks); Kenya Medical Research Institute, Kisumu, Kenya (V Were); Children's Hospital Wisconsin, Milwaukee, WI, USA (S Siddiqui, K Oldham); Boston Children's Hospital, Boston, MA, USA (F Evans); Duke University, Durham, NC, USA (E Smith); BethanyKids at MyungSung Christian Medical Center, Addis Ababa, Ethiopia (D Poenaru); National Hospital, Abuja, Nigeria (E Ameh); University of Oxford, Oxford, UK (K Lakhoo); University of California, Sacramento, CA, USA (D Farmer); Yale University, New Haven, CT, USA (D Ozgediz)

Correspondence to:
Neema Kaseje, Global Initiative for Children's Surgery, Managua, Nicaragua
nkaseje@gmail.com

Background To improve access to surgical care in rural Nicaragua, a collaboration was established between the Global Initiative for Children's Surgery (GICS), Operation Smile Nicaragua, and the Nicaragua Ministry of Health. Prior to implementation of the surgical programme Surgery for the People Nicaragua, our aim was to perform a baseline assessment of the Nicaraguan health system's capacity to provide safe surgical care in its rural zones.

Methods In June and July 2017, a retrospective baseline evaluation of safe surgical care provision was performed at two rural district hospitals in Las Minas using the GICS Optimal Resources tool, the WHO/Program in Global Surgery & Social Change (PGSSC) Surgical Assessment tool, the World Federation of Societies of Anesthesiologists Assessment tool, and the PGSSC Qualitative Assessment tool. Main outcome measures were: surgical workforce density, surgical volume, perioperative mortality rates, level of infrastructure, access to essential medicines, and health system financing.

Findings The surgical workforce density was six per 100 000 population, including one paediatric surgeon (the WHO target surgical workforce density is 20 per 100 000 population). The surgical volume was 1050 procedures per 100 000 population per year; less than 10% of the surgical volume was paediatric. Perioperative mortality rates were low but not routinely collected: range 0·12%–0·50%. There were major needs in infrastructure including: additional operating theatres; running water at one site; post-anaesthetic recovery room areas; and paediatric-specific surgical wards. There was adequate access to essential medications including oxygen, anaesthetics, and antibiotics. Care at the two district hospitals was free, and there were no recorded out-of-pocket expenses for surgical patients.

Interpretation A major success of the Nicaraguan health system is free surgical care, protecting patients from catastrophic expenditure. However, to improve access to surgical care in rural Nicaragua, there is a need for investments in human resources, particularly in anaesthesia and paediatric providers. Furthermore, there is a need for monitoring and evaluation of key indicators including perioperative mortality and complication rates.

Funding UBS Optimus Foundation.

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Declaration of interests

We declare no competing interests.