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Bridging the data gap in global health: an electronic surgical outcomes database at Mbarara Regional Referral Hospital, Uganda



Gustaf Drevin, Katherine Albutt, Frank Sanyu, Deus Twesigye, Godfrey R Mugenyi, Joseph Ngonzi, Stephen S Ttendo, Paul G Firth

Abstract

Background Annually, an estimated 17 million lives are lost from conditions requiring surgical care and at least 77·2 million disability-adjusted life-years could be averted through provision of basic surgical services. Despite the staggering burden of surgical disease, there are scarce data available to track current capacity, volume, epidemiology, outcomes, and quality of surgical care delivery in low-income and middle-income countries. We aimed to organise the hospital record system into a high-quality and high-fidelity searchable database that can be used to measure and guide expansion and provision of quality care at Mbarara Regional Referral Hospital (MRRH) in western Uganda.

Methods Initiated in 2013, the Surgical Services QUality Assessment Database (SQUAD) arose from a shared commitment to improving surgical quality and capacity through a collaboration between MRRH and Massachusetts General Hospital. SQUAD systematically enrolls and collects data on all surgical patients admitted to MRRH. Data are extracted from patient charts and admission, discharge, and operation logbooks by trained clerks—a process overseen by a data manager/statistician. Data variables are grouped into patient demographics, disease characteristics, cadre of clinicians, interventions, outcomes, and time. Data access and use is supervised by a committee of representatives.

Findings To date, SQUAD contains more than 49 000 patient records in a searchable electronic database. Quality assurance reports have been produced for internal use at MRRH, and in-hospital initiatives have been made in response to findings. SQUAD was prospectively validated in 2016, and retrospective validation studies are currently underway.

Interpretation Ongoing challenges include transitioning data capture methods from chart and log book review to a point-of-care electronic medical register and record system, while maintaining data entry. A future objective is the dissemination of clinical outcome reports through peer reviewed publications by authors from the collaborating institutions.

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Declaration of interests

We declare no competing interests.

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