Acute care surgery in Rwanda: Operative epidemiology and geographic variations in access to care

Evan G. Wong, MD,[a,b,c] Georges Ntakiyiruta, MD,[d] Mathieu C. Rousseau, MD,[a,b] Landouald Ruhungande, MD,[d] Adam L. Kushner, MD,[c,e,f] Alexander S. Liberman, MD,[a] Kosar Khwaja, MD,[a] Marc Dakermandji, MD,[a] Marnie Wilson, MD,[a] Tarek Razek, MD,[a,b] Patrick Kyamanywa, MD,[d] *and* **Dan L. Deckelbaum, MD,[a,b]** *Montreal, Quebec, Canada; New York, NY; Kigali, Rwanda; and Baltimore, MD*

Background. *Surgical management of emergent, life-threatening diseases is an important public health priority. The objectives of this study were to (1) describe acute care general surgery procedures performed at the largest referral hospital in Rwanda and (2) understand the geographic distribution of disease presentations and referral patterns.*

Methods. *We performed a retrospective review of prospectively collected acute care surgery cases performed at the Centre Hospitalier Universitaire de Kigali (CHUK) in Rwanda between June 1 and December 1, 2011. Using Pearson's χ^2 test and the Fisher exact test, we compared cases originating from within Kigali and transfers from other provinces. Geospatial analyses also were used to further describe transfer patterns.*

Results. *During the study period, 2,758 surgical interventions were performed, of which 25.6% (707/2,758) were general surgery operations. Of these, 45.4% (321/707) met the definition of acute care surgery. Only about one-third—32.3% (92/285)—of patients resided within Kigali, whereas about two-thirds—67.7% (193/285)—were transferred from other provinces. Most patients transferred from other provinces were younger than 18 years of age (40.4%; 78/193), and 83.0% (39/47) of patients older than 50 years of age originated from outside of Kigali. Specific operative indications and surgical procedures varied substantially between patients from Kigali and patients transferred from other provinces.*

Conclusion. *Emergency surgical conditions remain important contributors to the global burden of disease, particularly in low- and middle-income countries. Geographic variations exist in terms of operative diagnoses and procedures, which implies a need for improved access to surgical care at the district level with defined transfer mechanisms to greater-level care facilities when needed. (Surgery 2015;158:37-43.)*

From the Department of Surgery,[a] McGill University, Montreal, Quebec, Canada; Centre for Global Surgery,[b] McGill University Health Centre, Montreal, Quebec, Canada; Surgeons Overseas,[c] New York, NY; Department of Surgery,[d] University of Rwanda, Kigali, Rwanda; Department of International Health,[e] Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; and Department of Surgery,[f] Columbia University, New York, NY

SURGICAL MANAGEMENT OF EMERGENT AND LIFE-THREATENING DISEASES is an important priority of public health.[1] It is estimated that more than 2 billion people, mostly in low- and middle-income countries (LMICs), lack access to appropriate surgical care,[2] and of the 234 million surgical procedures performed annually, only 3.5% occur in countries with annual health care expenditures of 100$US per capita or less.[3] Multiple capacity studies have documented the profound lack of surgical capacity, and a number of population surveys in LMICs have revealed a very high unmet surgical need.[4-7] To move beyond documenting the need to design feasible solutions, a better understanding of the use of surgical services is required urgently.

Acute care surgery is the surgical subspecialty that deals with the urgent evaluation and treatment of nontraumatic general surgery emergencies.[8] In the 2010 Global Burden of Disease Study,

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Reprint requests: Evan G. Wong, MD, MPH, Department of Surgery, McGill University, 1650 Cedar Avenue, L9 411, Montreal, QC H3G 1A4, Canada. E-mail: evan.wong@mail.mcgill.ca.

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