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Reply

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Many thanks to Dr. Monjok [1] for his letter, which confirms that Uganda resembles other countries where rates of major operations lag far behind high-income countries [2, 3]. A more recent estimate of the global volume of surgery shows that 74% of major operations are performed in high-income countries and only 3.5% in low-income countries [4]. More specifically, we also found that procedures in rural Ugandan hospitals (mainly emergencies) were very narrow in scope, which implies that patients with more complex conditions simply are not able to access care. Those with elective conditions reach the national hospital, which is congested, with long waiting times on the surgical wards.

In Uganda, most operations in the rural general (district) hospitals are performed by medical officers (physicians) with support from anesthetic officers (non-physicians). The turnover of medical officers is generally quite high because they are usually young physicians posted soon after the completion of medical training. They often seek urban jobs with greater career opportunities and improved quality of life. As a result, nearly half of medical officer positions in rural hospitals are unfilled.

The role of non-physician or "mid-level" providers is gaining greater recognition as part of the solution to the human resources for health crisis in low-income countries. Dr. Monjok's [1] support of non-physicians performing surgery has been echoed in Malawi, the Democratic Republic of Congo, Tanzania, and other countries in the region. Previous reviews support the essential role of these cadres in health service delivery to the rural poor [5]. This was highlighted at the Global Health Workforce Alliance meeting in March 2008, when the World Health Organization released its "task-shifting" guidelines [6]. These have been primarily focused on the HIV epidemic, but the principles can be applied to surgical services.

For task-shifting to be effective, there should ideally be effective referral systems between first- and second-level facilities and adequate support and supervision from specialist surgeons. In anesthesia, where "task-shifting" has been ongoing for many years in Uganda, non-physician providers also have concerns of career development. In some countries where new cadres have been created or surgical tasks have been added to existing roles, some have argued that this would not be necessary if adequate incentives attracted physicians to work in rural areas. These would include allowances, improved accommodations and living conditions, schools for children of health professionals, and access to continuing professional development [7]. The irony in some of these countries (including Uganda) is that an absolute workforce shortage coexists with unemployed physicians in urban areas, due to inadequate incentives for rural service, administrative challenges in creating new posts and hiring personnel, as well as curbs

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on health spending imposed by development organizations, which are only recently being revised [8].

"Task-extension" might be a more appropriate term rather than "task-shifting" to ensure that adequate support and supervision and referral are part of the concept along with longitudinal relationships between specialist surgeons in urban areas with personnel in selected rural hospitals. In Uganda, non-physicians, such as clinical officers (3 years of training), perform minor surgical procedures; however, recently extension of their role has been suggested [9]. Acceptance from the surgical fraternity in Uganda would likely be maximized if this extension was limited to select procedures. Also at the center of the debate in Uganda and other countries is who should perform circumcision in rural areas to prevent the transmission of HIV [10]. Anesthesia and nursing are equally essential to surgical services, especially as surgical safety gains importance globally [11]. Mutually beneficial long-term partnerships between academic institutions also can increase resources for training programs in Africa, and we have established such a relationship [12, 13]. The testimony of Dr. Monjok and others with similar experiences are critical to building the evidence base for improved surgical care in low-income countries.

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