International surgery interest in Canadian medical training programs

David Mainprize (Meds 2015) Jimmy Yan (Meds 2015) Mike Livingston (Gen Surg PGY 3)

Globalization is the zeitgeist of our current world. With technological innovation and commercial liberalization, interactions across borders are being propelled forward at a meteoric pace. Health care systems have also been increasingly engaged in international endeavours through advances in medical education, biomedical research, and information dissemination. A part of this health care globalization process has been the promotion of public awareness and prioritization of international public health. Global health continues to be a growing interest among both medical professionals and trainees, and international programs have been established or supported in undergraduate and post-graduate medical education in each of Canada's 17 medical schools.¹

Despite the increasing awareness of international health actions, not all areas of the global health sphere are equally represented in this effort. Major global health advances and infrastructure have been invested in fields such as infectious disease, epidemiology, community health, and occupational health while the field of surgery has been relatively underemphasized and referred to as the "neglected stepchild of global health."² While it has been estimated that approximately 11% of the total global burden of disease can be attributed to surgically amenable conditions,³ only 3.5% of surgical procedures worldwide are carried out in the poorest third of countries where surgical need is the greatest.⁴ Even more distressing, an estimated 2 to 3 billion people in the world are without access to basic surgical care.^{5,6} While the awareness of global infectious disease issues has pioneered incredible international efforts resulting in substantial global impact on diseases such as polio, smallpox, tuberculosis, and AIDS,² an analogous movement championing international surgery as a public health initiative to address the immense gap between surgical need and provision in impoverished nations has been slow to gather momentum.

Traditionally, the languid push for monetary and political support towards surgery and perioperative care as a global health priority has been attributed negative perceptions. Common misconceptions towards international surgical care include thoughts that these efforts are not cost-effective, require too large an initial capital investment, require highly specialized training programs, and have a disproportionately small impact on the population.⁷ However, more recent research by physicians with interests in global health and groups such as the Disease Control Priorities Project have revealed that surgical interventions are cost-effective and can provide essential care to the most vulnerable in impoverished populations.^{8,9} One issue delaying the correction of these misguided perceptions results from the minimal exposure to international surgery that medical professionals receive in their early training stages.¹⁰ As Canadian training programs have begun to incorporate focused objectives on

global health in their curriculum,¹ inclusion of international surgical health education may reframe its current misconceptions and inspire a greater interest on global surgical health.

One of the main founders and promoters of international surgery was Canadian surgeon Dr. Norman Bethune who described the field as 'a humanitarian branch of medicine concerned with the treatment of bodily injuries or disorders [...] including cooperation and understanding between nations involving education, research, development and advocacy.'¹¹ Spearheading the pursuit of Dr. Bethune's vision in Canada is the Committee of International Surgery, a branch of the Canadian Association of General Surgeons, whose main directive is promoting international surgical awareness and service among Canadian surgeons and residents.¹³ Several studies have been performed to assess the level of awareness and interest toward international work in the surgical community.

A study in 2003 has shown that interest in international medical efforts increased from 6%-20% between 1984 and 2003 in US medical schools and is thought to be similar in Canadian programs.¹² One method of promoting interest and awareness while also providing a valuable learning opportunity for residents interested in international surgery is elective experiences. The Royal College currently allows 3 months of overseas electives during Canadian residency training but funding for these electives is variable depending on the affiliated program.¹¹ A recent survey shows that 63% of residents would be interested in doing an international surgical elective and of those whom had already been on one elective, 98% responded with a desire to perform another.¹¹ The same questionnaire evaluating long-term interest in international work found that 25% of all Canadian general surgical residents and 80% of those who had done a previous international elective were interested in incorporating international surgery into their careers.¹¹ Similar surveys have been performed with surgical staff to assess their interest and support for international work. One such survey run by the University of Toronto in 2002-2003 indicated that 46% of staff were interested in being involved in international work, and of those who had previous international experience an overwhelming majority found it personally and professionally beneficial.¹¹ Approximately 3/4 of the respondents in this study believed that medical students and residents should be encouraged to pursue international electives and that more funding should be made available to facilitate this goal.¹¹

These surveys illustrate the strong interest among Canadian surgical residents and staff towards participating in international surgery. Efforts to explore the discrepancy between the apparent interest and current initiatives have identified specific barriers preventing students from committing to international work. In one survey Canadian general surgical residents identified multiple bar-

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riers including family or other commitments, insufficient elective time, a lack of sufficient information or opportunity, and financial burden, the last of which was the most commonly cited.¹¹ There currently appears to be a strong interest toward pursuing international surgery in Canadian training programs but there remains a gap between this interest and concrete action, which may be due to certain personal and institutional barriers. One of the next steps is to improve financial and personal supports for students interested in international surgery experiences and introduce the fundamental concepts of international surgery to the medical undergraduate curriculum to motivate and inspire student interest early in their careers. Through improved organizational infrastructure and administrative support, residents and medical students will gain greater access to international surgical opportunities.

The long term goal of improving international surgery exposure during medical education is to eventually address the surgical care deficit, as there are many impoverished communities without access to basic surgical care. One avenue of addressing the underserved international burden of surgical disease is by targeting undergraduate medical learners. Early exposure to the field through formalized teaching and oversea elective experiences will hopefully recruit a larger number of students to the field of international surgery who may become strong advocates and providers of international surgical care in the future. Additionally, as student interest grows and institutional supports expand, current staff surgeons may be encouraged to become involved more heavily in international surgical work creating more teaching and surgical care partnerships in areas of the world currently underserved.

As much of the world's most vulnerable populations still lack access to safe surgical care, a new generation of surgeons interested in and passionate about international surgery is needed to bridge this gap. Expanding student interest and improvement of institutional supports to advance the ease of access to elective opportunities for residents and medical students in international surgical programs may eventually help address the current unmet burden of surgical disease in underdeveloped areas.

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