Medical schools and residency programs are increasingly active within the realm of global health. Surveys suggest that most medical schools participate in global health–related activities, although the goals and scope vary widely.1 Studies from Yale and Duke Universities showed that internal medicine residents who travelled abroad on a clinical elective gained knowledge in tropical medicine, tended to favour more general specialties, and worked more often with other marginalized populations.2,3

Existing global health curricula are driven largely by trainees, and residency programs will need to offer these activities to stay competitive and attractive. Furthermore, global health activities, at home and abroad, are well aligned with the CanMEDS health advocacy role, which calls for physicians to meet the needs of not only their own patients but also communities near and far. Given Canada’s tradition of welcoming immigrants and refugees, the skills learned through a global health curriculum will be broadly applicable.2,3

With these benefits in mind, we at McMaster University have started to envision an academic curriculum in global health for our Internal Medicine Residency Program. We have drawn on the important work of organizations such as the Canadian Pediatric Society (CPS), the Association of Faculties of Medicine of Canada (AFMC), the Global Health Education Consortium (GHEC), and the Working Group on Ethics Guidelines for Global Health Training (WEIGHT). Herein we present a blueprint for curriculum development, and a proposal for collaboration on a Canada-wide internal medicine residency curriculum in global health.

Step 1: Agreement on the Definition of Global Health

As a relatively new academic field, the concept of global health continues to evolve. Curriculum development therefore requires, as a first step, agreement on the definition of global health. In their 2009 article, “Towards a Common Definition of Global Health,” Koplan et al. defined global health as “an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes inter-disciplinary collaboration; and is a synthesis of population-based prevention with individual-level clinical care.”4

This definition distinguishes the field of global health from both “public health” (which focuses more on the health of individual communities, with less emphasis on transnational determinants and solutions) and “international health” (which focuses more on the health issues of low- and middle-income countries and has been traditionally less multi-disciplinary). We
will use this definition as a starting point for our discussion.

**Step 2: Development of a Consensus on the Core Competencies That a Global Health Curriculum Would Address**

The next step is to define the educational goals and objectives of a global health curriculum. Several organizations have outlined core competencies in global health for undergraduate medicine programs. In addition, institutions in other jurisdictions, mostly in the United States, have developed and refined global health curricula specific to internal medicine residency programs. In Canada, CPS has endorsed a common global health curriculum to be used in all Canadian pediatric residency programs. Drawing from these various sources, an appropriate curriculum in global health for Canadian internal medicine residency programs can be developed.

In 2009, AFMC and GHEC published a joint proposal outlining core competencies in global health for undergraduate medical education. This document provides a list of topics that should be included in any global health curriculum, and is summarized in Table 1.

In 2009, CPS developed a three-tiered approach to residency education in global health, categorizing knowledge and skills in global health as (1) those that every pediatric resident should acquire, (2) those tailored to residents with a specific interest in global health, and (3) those aimed at residents planning a career with a significant global health component. A common curriculum was agreed upon through national consensus meetings, and modules were developed that included PowerPoint presentations, videos, and possible objective structured clinical examination (OSCE) and written examination questions. This effort was supported by both CPS and the Royal College of Physicians and Surgeons of Canada.

At McMaster University, our global health curriculum committee, drawing on the work outlined above, has proposed a similar three-tiered framework of core competencies in global health for internal medicine residents. Within each of these tiers, learning objectives will be aligned with the topics included in the AFMC/GHEC proposal, and will be stratified according to the CanMEDS roles. In addition, enabling competencies will be developed within each domain. Our proposal provides both a framework for organizing curricular activities, and a mechanism for measuring the successes or failures of the program.

**Step 3: Identification of Opportunities for Integration of Global Health Objectives into Internal Medicine Residency**

Once consensus is reached on the content of a global health curriculum, efforts must then focus on how this material can be incorporated into the larger internal medicine residency curriculum (Table 2). Tier 1 learning objectives (those applicable to all graduating internal medicine residents) could be addressed through such traditional residency program activities as ward rounds, academic half-days, noon rounds, and periodic retreats. Elective rotations that focus on marginalized populations also could be developed. Resident knowledge and skills in global health could be tested using such formal evaluation tools as written examinations and OSCEs.

Tier 2 learning objectives (those tailored toward residents with special interest in global health) could be achieved through participation in such activities as a dedicated inter-disciplinary global health journal club, extracurricular courses on global health topics, research projects, and a mentorship program matching residents with faculty active in global health. Tier 3 learning objectives (for those wishing to have a significant

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**Table 1. Core Competencies in Global Health**

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<tr>
<td>Global burden of disease</td>
<td>Academic half-day topics with global health focus</td>
<td>International electives with appropriate pre-departure and post-return training</td>
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<td>Health implications of travel, migration, and displacement</td>
<td>Dedicated monthly global health noon teaching on clinical teaching unit (CTU) rotations</td>
<td>Formal fellowship programs in global health for R4 year and beyond</td>
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<tr>
<td>Social and economic determinants of health</td>
<td>Periodic global health program retreats</td>
<td>Epidemiology training with focus on skills required for research in resource-limited settings</td>
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<tr>
<td>Population, resources, and environment – including effects of population growth and resource scarcity</td>
<td>Objective structured clinical examination (OSCE) stations with focus on global health core competencies</td>
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<tr>
<td>Health care in low-resource settings</td>
<td>Clinical electives that incorporate global health core competencies, for example with inner-city populations</td>
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<tr>
<td>Human rights and health care</td>
<td>Informal teaching on ward rounds</td>
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**Table 2. Examples of Curricular Activities by Level of Interest**

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global health component to their career) would likely require the development of dedicated fellowships in global health within existing internal medicine residency programs. Such fellowships could be combined with a 4th year in general internal medicine, or added as a “clinical scholar” year, with appropriate funding. Participants would be expected to spend a significant amount of time in clinical global health activities, including both local experience with a focus on marginalized populations, and international placements.

**Step 4: Implementation and Evaluation**

A robust evaluation process will be required to ensure that the goals of a curriculum in global health are being met. With shortened resident work hours, benefits will need to be clearly documented in order to prove the worth of these activities. Documentation could take many forms, including testing formal knowledge on examinations, pre- and post-curricula surveys, and long-term evaluation of how training affects the careers of graduates. This will allow for constant re-evaluation and implementation of ideas for improvement. As well, any process that allows for travel abroad for the purpose of training or teaching should ensure that there is no negative impact on the host community, and ideally mutual benefit. Ongoing needs and impact assessments, as well as ethical surveillance, will be required.

**Call to Action**

The field of global health is rapidly expanding, both in scope and influence. Response to the increasing demand for learning in global health within traditional medical education programs has been varied and often haphazard. We therefore propose a collaborative effort to develop, implement, and evaluate a common global health curriculum across Canadian internal medicine residency programs.

While this curriculum will draw on the strengths of similar efforts in related specialties, it will also provide innovation by focusing on the needs of internal medicine residency and incorporating both key and enabling competencies. The benefits of such collaboration would include the following:

- Building consensus on the core competencies in global health that all internal medicine residents in Canadian programs should acquire prior to licensure, building and expanding upon previously accepted undergraduate core competencies
- Pooling of expertise, including global health theory and practice, curriculum development, and curriculum evaluation
- Sharing of and rationalizing use of resources (e.g., teaching modules and postgraduate courses), including collaborations with institutions in low- and middle-income countries
- Strengthening and sustaining a sense of community among Canadian general internists and subspecialists with an interest in global health
- Strengthening links to other postgraduate disciplines with an interest in global health

As a next step, we are undertaking a survey of all Canadian internal medicine residency programs, to document current activities and perceived needs in global health education within each of these programs. We will also solicit input from each program for representatives for a new national committee whose goal will be to provide a proposed curriculum in time for the October 2013 meeting of the Canadian Society of Internal Medicine.

**References**