PERSPECTIVES

Global health curricula in medical schools

Richard J. Deckelbaum, MD [1,2], Katherine M. Horan[3], MD, Andre-Jacques Neusy, MD[4], Tina Armstrong, MSW[5], Teresa N. Marsh, MA[6], Emily Robinson[7], Karen Bamberger[7], Tamara Delorme[7], and A. Mark Clarfield, MD[8]

[1]Department of Pediatrics and the Institute of Human Nutrition, Columbia University Medical Center, New York, NY. [2]Columbia University Office, Medical School for International Health, New York, NY. [3]Baystate Medical Center, Tufts University School of Medicine, Boston, MA. [4]Training for Health Equity Network, THEnet, Brussels, Belgium. [5]Department of Aboriginal Affairs, Northern Ontario School of Medicine (NOSM), Sudbury and Thunder Bay, ON. [6]School of Rural and Northern Health, Laurentian University, Sudbury, ON. [7]Medical student, Northern Ontario School of Medicine, Sudbury and Thunder Bay, ON. [8]Medical School for International Health, Ben-Gurion University of the Negev, Beer-Sheva, Israel

To meet the demand for increasing capacity of the global health (GH) workforce many medical schools worldwide are in the process of establishing GH curricula. Still, there is little consensus as to how to train future physicians with the skills, attitudes and knowledge required to meet the currents gaps in GH practice, policy, education, advocacy and research. Thus, the co-authors of this paper, all keenly interested and involved in achieving better GH education for medical schools, organized an open retreat to help address this. This paper summarizes the processes required and provides additional recommendations to fill this gap. Steps taken by the Medical School for International Health, a school which focuses on GH, and other schools and organizations (e.g., NOSM, GHEC, THEnet,) to establish GH competencies, education and training approaches, as well as outcome monitoring, and integration of teaching with communities, are reviewed. After guidelines were provided , we addressed topic areas important to GH medical education, such as competencies, planning methods of GH inoculation in curricula, GH clerkships, curricula monitoring and evaluation and principals of community interaction. We reviewed existing resources and processes in each area, identified gaps, noted barriers to implementation, and put forth recommendations for each topic area.

The Need

The current epidemics of Ebola, and obesity with its accompanying cardiovascular diseases, are now shared worldwide. With increasing globalization, and the realization that health problems in developing and developed countries are shared , students and faculty recognize that current medical education and training needs to increase the capacity of global health practitioners is often lacking. Approaches for how to address this are not consistent across academic institutions. To this end we planned a half-day symposium, "Global Health Curricula for Medical Schools - Processes Needed" which". It was held at Rendez-Vous 2012 on October 11, 2012 in Thunder Bay, Ontario, the purpose of which was to outline processes required and to provide recommendations to fill this gap. Rendez-Vous 2012 convened health professionals, educators and researchers from all parts of the world to share experiences, opportunities and challenges in education, service and research. Our symposium objectives were: 1) to understand the curricular components needed in medical schools for GH education and training 2) to plan approaches for integrating novel education and local community programs into medical schools and 3) to plan monitoring and evaluation of GH education. The symposium utilized framework presentations, roundtable discussions and break-out groups. The framework areas are summarized below and set the stage for very lively back and forth discussions between speakers, panelists and participants.

Global Health Competencies for Medical Schools

This topic was summarized by Richard Deckelbaum, an experienced practitioner of GH who addressed the question, "What is competency?" Competence is defined as the quality of being adequate or well qualified physically and intellectually.[1] The processes whereby an influential organization, the Global Health Education Consortium (GHEC) established such competencies for what every future physician needs to know in terms of GH were summarized [2]. The steps involved in establishing these competencies were carried out by the GHEC/Association of Faculties of Medicine of Canada Resource Group Joint Committee, which had representation from GHEC faculty members and students from Canadian and US medical schools. The Resource Group emphasized differentiating core knowledge from elective knowledge in terms of GH competencies. The GHEC GH competencies are available via the GHEC website reference.[2] Predominant areas for acquiring attitudes, knowledge and skills needed by all physicians include the following - the global burden of disease and its relationship to globalization, maternal and child health, human rights and health, nutrition and sanitation, health inequalities, tropical and infectious diseases and environmental health.

Additional competencies of GH practitioners, and how these might differ among specialized fields, still require more definition and inputs. For example, how do the GH competencies needed for public health practitioners compare to those needed by a medical practitioner? With these competencies, how might GH health practitioners and their parent schools impact better on their local and distant communities? With this framework, we then went on to discuss processes whereby medical schools can improve their roles to local and distant communities' well-being in part by strengthening GH curricula and opportunities.

Medical Schools as Catalysts for Greater Health Equity

A group of health-profession institutions have formed THEnet, a consortium "committed to achieving health equity through education, research and services responsive to community priorities."[3] THEnet, Training in Health Equity Network, emphasizes that GH should be framed around health equity and social accountability because socio-

economic, gender and ethnic disparities in medical care and health outcomes persist.

Since December 2008, several health profession institutions across the world, pioneering innovative models to address health workforce challenges in disadvantaged communities, have joined forces through THEnet. These institutions, confronted by the necessity to develop solutions that address the health equity gap in their region, have moved away from a predominant model of medical and health professional education, which has not included the local community in design and implementation of curricula. Dr. Andre-Jacque Neusy, who helped found THEnet, stressed that health professional education has not previously sufficiently kept pace with evolving social, health and demographic challenges that would reduce the GH equity gap.

THEnet, with its partners, conducts cross-institutional research and provides peer support and capacity development to increase the positive health impact of health professions schools. It has also developed an Evaluation Framework for Socially Accountable Health Professional Education.[3]

Dr. Neusy then gave examples of steps used by THEnet schools to adopt community-linked strategies; which include-

- Health and social needs of targeted communities guide education, research and service programs.
- Students are preferentially recruited from the communities with the greatest health care needs.
- Health professions education is embedded in the health system and takes place in the community and clinics instead of predominantly in university and hospital settings.

Community engagement is at the heart of their success and includes mobilizing and enabling communities to take responsibility for their own health over the long-term. Operating in very different contexts – from poor communities in the United States, remote indigenous communities in Canada and Australia, rural regions of Africa to urban slums and marginalized communities in the Philippines – THEnet schools have been remarkably successful. They have increased the number and quality of health workers and improved health outcomes in deprived areas. Their graduates' practices have also significantly improved. Thus, in emphasizing social accountability and community engagement, medical schools can be a critical tool to help dissolve/decrease the health equity gap.

The Medical School for International Health (MSIH) Approaches to Global Health Medical Education

In this vein, Mark Clarfield, the director of MSIH, the only medical school, to the best of our knowledge, which specializes in GH , described how this school was distinct from all other medical schools in ensuring that the skills, attitudes and knowledge relating to practicing GH are integrated into the curriculum for all students and not simply a "track" for those interested in GH. MSIH is housed at Ben-Gurion University Faculty of Health Sciences in Beer-Sheva, Israel, and has an affiliation with Columbia University Medical Center in New York.[4] MSIH structures its curriculum over four years, similar to most North American medical schools.

However, what is different is that studying in Beer-Sheva, Israel is already "a foreign global health experience" within a setting that includes new languages, and a variety of cultures, as well as a different health and medical care system. At MSIH, a specific course is presented in the first year focusing on the basic principles of GH and medicine. In the first two years, students choose four of ten different GH modules that include such topics as *Nutrition in Development*, *Aging in the Developing World*, *Comparisons of Healthcare Systems Worldwide*. Throughout the third year, which has basic clinical rotations similar to LCME-approved schools, cross-cultural and GH workshops are held utilizing role playing, guest experts, program patients and other tools in order to integrate GH into clinical training. The capstone GH experience is a two month, international elective during the fourth year where students spend one month in a rural primary-care health center usually located in less developed regions. Each site has a committed, local academic coordinator, has formed some association with Ben-Gurion University, and offers a well-organized and coordinated clerkship. To date, country sites for these international electives have included among others India, Ethiopia, Kenya, Uganda, Nepal, Vietnam, Peru, and Israel.

Dr. Clarfield commented on challenges for students at MSIH which include the distance from home, language barriers, cultural differences, and for most US students, high loan burdens. Nevertheless, even with these challenges, according to data from on-going follow-up questionnaires sent to MSIH alumni, from the first of the six classes greater than 75% of MSIH graduates are contributing meaningfully to GH in teaching, research, and practice.

Examples of local GH activities include students at MSIH actively working with social services in Beer-Sheva to meet and understand community family social and health conditions with personal visits to "problem" households at least monthly. MSIH students also participate in special refugee clinics and other activities outside the medical school providing services to disadvantaged groups.

Dr. Kate Horan, an MSIH graduate, then described how students and faculty at MSIH formed a Global Health and Medicine (GHM) working group of eight students (two from each year) and faculty members who serve as the GHM course coordinator and GH curriculum director. Their mission was to facilitate the academic and professional growth of MSIH students' GH knowledge and skills. In designing and structuring this course the GHM group used inputs from class surveys, systematic review of available curricula, different GH sites and organizations, and reports from various conferences and committees. The course outlined different primary GH competencies, in parallel to those of the GHEC competencies, and these included knowledge on GH organizations, global burden of disease, cross-cultural medicine, vulnerable populations, primary care and GH ethics.

For each of these overall competency areas subgroups were defined; for example, under GH organizations the factors relating to the history of GH, GH organization and efforts, health systems and factors relating to health economics are reviewed. Resources recommended for the GHM course included GH textbooks, a course-pack that was produced by the GHM working group, as well as case studies produced by the group. The course-pack includes GHM curriculum overviews, human rights overviews, book recommendations, GH resources, the course syllabus, readings and additional resources. Recommended steps needed in implementing a GH curriculum include forming a central working group/ committee (student/faculty), creating a mission statement and defining goals, obtaining the permission from school administration in terms of hours available, possible credits, and resources available, identifying steps needed to integrate competencies into the curriculum and evaluating of the GH curriculum by faculty and students.

Integrating Local Communities into Medical Education

Aboriginal communities are especially important in GM curricula and the location of the academic meeting at which this symposium was held underlined this aspect of GH. The Director of Aboriginal Affairs at The Northern Ontario School of Medicine (NOSM), Tina Armstrong, emphasized that aboriginal communities are multi-dimensional and dynamic, whereas post-secondary educational institutions and health organizations tend to be much more structured and rigid in form and function. This highlights the need for students and faculty to remain open in their perspective and attentive to what the communities suggest are priorities for improving their social and health status. It was pointed out that in order to gain trust, it is important to note that the following Principles of Aboriginal Community Engagement are kept in mind through the development of school-community relationships and curriculum as follows:

- Becoming knowledgeable and understanding of each other - This is key in the integration of local communities and medical education.
- Establish relationships, build trust, work with the formal and informal leadership, and seek cooperation and commitment from community organizations and leaders - Commitment can be validated and enhanced with community voices, stories, and feedback.
- Understand that community self-determination is the responsibility and right of all people who comprise the community - Understand predominating community notions of knowledge, language, and customs and how they affect the actions of individuals.
- Partner with the community to identify or create the necessary support to achieve the purpose - True partnership with the community involves transparency, communication and asking what the community needs. Have the community provide information as to what is needed to create that necessary support.
- Recognize and respect community diversity - Identify influential individuals within the community that can assist in creating a higher level of understanding of the community and the diversity of the nation in which this commu-

nity is located.

- Accept and be prepared to release control of health and non-health related actions or interventions to the community - Be flexible to meet the changing needs of the community through the self-identification and self-reflection of one's location.
- Understand that community collaboration requires long-term commitment by the institution and community partners - Respect the partnership through meaningful dialogue and being cognizant of the application of partnerships.

The above presentations sucessfully set the stage for very active give and take discussions relating to issues in GH training. For example, should a medical school curriculum include substantial immersion and training in local communities, both aboriginal and non-aboriginal? It was of interest that NOSM students viewed this issue as somewhat outside the purview of GH, because their experience in local communities was in Canada and not in a developing country. But other students and faculty from outside of NOSM suggested that much of the NOSM-type training did indeed fit into the true definitions of GH, especially at the local level. (NOSM, one of the founding members of THEnet, integrates its curriculum and training into, and with, local communities.) Discussions were held regarding whether GH truly does fit into "local" health missions in low-resourced communities in so-called developedcountries. Still, students from NOSM argued for more exposure to health settings in underdeveloped countries although the aboriginal communities in Northern Ontario do share many common barriers and health problems with local communities in developing countries.

Another topic of active interchanges related to GH "clerkships" and the role of students in building GH curricula. Participants in the workshop questioned whether one needs to first undergo the basic medical clerkship training in different clinical areas, e.g., medicine, surgery, pediatrics, etc., before having an effective GH clerkship. A number of participants suggested that students could contribute in terms of service - learning programs and projects before they have completed their clinical clerkship trainings. Finally, participants strongly stressed the need to better utilize inputs from students along with closer student-faculty collaboration and interaction, in building GH curricula.

Conclusions from Breakout Groups

After the roundtable discussions, the audience and the speakers divided into breakout groups. The groups met to further discuss important areas relating to GH education and training. These included GH competencies, GH clerkships, teaching and inoculation approaches for GH in medical schools, and monitoring and evaluation of GH curricula and outcomes. The groups were charged with reporting on information and/or approaches that are currently available for the topic areas, identifying gaps in current information and/or approaches, providing recommendations to address gaps and improve current approaches, defining the existing or potential barriers to implementing the recommendations, and suggesting timelines and monitoring and evaluation approaches for the recommendations where appropriate.

After their meetings, summaries from the breakout groups were presented and integrated in a plenary session in the following areas:

Global Health Competencies and Curriculum

Participants agreed that while GHEC [2], MSIH and other schools are initiating GH competencies, there are still no formal or recognized and externally accredited set of such competencies in medical school curricula and that efforts to establish them are most welcome. Very few surveys or reports exist on evaluation of GH competencies. In addition, there is insufficient tracking of students in graduate outcomes in terms of GH learning and career commitments. The participants suggested that there is often a lack of communication between faculty and GH student interest groups in individual medical schools and, as well, in GH organizations.

In terms of monitoring and evaluation current surveys tend to be very quantitative and may be measuring the wrong "endpoints." Recommendations were provided to improve achievement of GH competencies and improve GH curricula as detailed in Table 1.

Recommendations about how to better monitor and evaluate GH curricula were then presented with examples of specific steps needed as follows:

Table 1: Recommendations to improve GH curricula

- Promote more interaction and involvement of students, and faculty with senior leadership in medical schools
- Establish a framework of GH competencies which will be agreed upon by associations of schools, faculty and students
- Translate GH competencies into specific learning objectives
- Weave or "inoculate" GH into existing curricula (e.g., when studying liver transplantation, consider its economic, ethical, moral, and other aspects in different healthcare settings)

- Use qualitative focus groups more effectively and frequently in order to facilitate the setting of priorities based upon community as well as student perceptions as to what is needed in learning skills, attitudes, and knowledge relating to GH. Focus groups should include students, faculty, and community members.
- Give more attention to qualitative analyses
- Use improved evaluations for assessments of clinical encounters in the community and in health centers
- Improve tools for evaluation of preceptors and of student's skills by the preceptors
- Establish guidelines for "two-way-streets." This involves an emphasis on what the healthcare students and professionals can obtain from the community and what can be given back to the community
- Establish timelines and metrics for monitoring and evaluation for GH curricular and competency components

Global Health Clerkships and Integration with Communities

While many schools provide GH clerkships for students in diverse communities, a number of concerns were raised which include:

- Unsupervised clerkships that end up merely offering "medical student tourism"
- Clerkships may have little effect on the community
- What objectives are the clerkships achieving in terms of wellbeing in the community, for patients possibly receiving unsupervised care as well as emotional and cultural interchanges between students and the community? Students working in the community should place no burden on the community itself.
- Students need to be better prepared for their community clerkships through improved a) understanding of their goals and roles; b) use of local languages (at least a few key words); and c) knowledge of and integration into local culture
- The community needs to be better prepared to provide peer support from within the community, and, like the students, the community needs to be involved in preparing for interaction with students, and to identify and improve problems at a community level

In summary, this symposium on "Global Health Curricula for Medical Schools - Processes Needed" assessed useful and practical information as to what is currently available to improve GH teaching in medical schools, identified gaps relating to GH training, and provided a substantial number of concrete recommendations to increase human resource health capacities along with community "win-win" interactions for GH practitioners, academics and researchers in different settings. Of relevant interest, a common theme in discussing GH is that barriers and solutions to solve problems in developing countries and countries in transition are commonly shared with populations in developed countries. Many of the economic and health disparities in the neighborhoods surrounding Canadian and U.S. medical school campuses are shared by and are being worked on in the developing areas in Latin America, sub-Saharan Africa and southeastern Asia. It is of significance that some of the solutions now being provided in these lower income settings might be applied locally in North America as well as other areas in the "developed world". In fact, weakening of the borders between what is important locally and what is happening globally has led to the increased utilization of a new word - "glocal." Of satisfaction to all participants at the symposium, we came away with the message that improved GH curricula in medical schools can and should be a major contributor to improving individual and population well-being both in their local communities and internationally.

References

1. Competency, definition. Accessed at www.thefreelibrary.com/http://answers.ask.com/Business/Management_and_HR.
2. Global Health Education Consortium. Accessed at http://globalhealtheducation.org/SitePages/Home.aspx.
3. THEnet. Accessed at http://www.thenetcommunity.org/.
4. The Medical School for International Health. Accessed at http:// http://www.msih.net.