

Information empowerment: predeparture resource training for students in global health*

Gurpreet K. Rana, MLIS

See end of article for author's affiliation.

DOI: <http://dx.doi.org/10.3163/1536-5050.102.2.008>

The Taubman Health Sciences Library (THL) collaborates with health sciences schools to provide information skills instruction for students preparing for international experiences. THL enhances students' global health learning through predeparture instruction for students who are involved in global health research, clinical internships, and international collaborations. This includes teaching international literature searching skills, providing country-specific

data sources, building awareness of relevant mobile resources, and encouraging investigation of international news. Information skills empower creation of stronger global partnerships. Use of information resources has enhanced international research and training experiences, built lifelong learning foundations, and contributed to the university's global engagement. THL continues to assess predeparture instruction.

INTRODUCTION

The Taubman Health Sciences Library (THL) at the University of Michigan (U-M), having identified the move toward interdisciplinary global health research and education on university campuses across the United States [1] and at U-M, leveraged opportunities to work with our health sciences schools and U-M's international university partners. In an ever-expanding and interdisciplinary global health field, THL aimed to strengthen its role in developing global health initiatives.

U-M is committed to being a global university. U-M's president has expressed that:

to be relevant in a world that knows no boundaries, higher education must reach far beyond its campus. Never before have we had so much to learn from other nations...Our students know this perhaps better than anyone, and they look to the university to take advantage of its global connections to expose them to a broad international experience. [2]

Engaging actively in this commitment, THL is collaborating with U-M health sciences units to provide information skills training in preparation for faculty- and student-led international travel. Laying stronger foundations in information literacy empowers U-M faculty and students to create stronger international collaborations. It also impacts those in underserved communities and developing regions, with whom students will connect, collaborate, and share information skills. The UNESCO definition of information literacy specifically emphasizes the power of information literacy in transforming lives:

Information literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal,

social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations. [3]

This paper describes the THL experience in providing predeparture training to global health students in our health sciences schools.

PRE-INSTRUCTION ASSESSMENT

In 2010, before creating structured predeparture training, THL surveyed information skills, attitudes, and information-seeking behavior of first- to fourth-year medical students who self-identified as being engaged in, or having the intention to become engaged in, global health initiatives during their medical school years. An email survey request was sent out to all first- to fourth-year medical students in May 2010. One-hundred twenty-five medical students responded, a response rate of 18.8%. When asked the question, "Have you used information resource(s) to prepare for your global health project(s) and/or international experience?," 72% responded in the affirmative. When asked to identify all the types of information resources that they used in their predeparture preparation, although some identified databases and some clinical sources, 82% indicated use of "search engines (e.g., Google, Yahoo, YouTube)" as a major source of predeparture global health information. When the same students were asked to indicate their level of confidence in their ability to conduct global health research and in their knowledge of relevant sources of information, 50% did not feel confident and 32% answered in the neutral. This indicated that there was indeed a need to create opportunities for predeparture information resource and skills training among U-M's globally engaged medical students.

INSTRUCTION PROGRAM

THL wanted to ensure students and their faculty were aware of the need for effective use of information resources in international learning and research

* Based on a presentation at MLA '13, the 113th Annual Meeting of the Medical Library Association; Boston, MA; May 7, 2013.



Supplemental Figure 1, Figure 2, and Figure 3 are available with the online version of this journal.

experiences, and that they recognized the role of THL informationists as members of the predeparture team. To achieve this goal, THL concentrated on developing relationships with programs that included predeparture training in the School of Public Health (SPH), U-M Medical School (UMMS), and U-M School of Nursing (UMSN).

School of Public Health predeparture training orientation

THL contacted and created a relationship with SPH's new Global Public Health Initiative in fall 2011. All SPH students taking part in an "in-country" international experience are required to complete a predeparture orientation session. THL became a standing part of these cross-departmental orientations. In addition to their introduction to relevant global health and predeparture information tools (THL's role), the graduate students' orientation consisted of training on documentation of their international experiences, cultural preparedness, travel health and insurance information, emergency and security protocol, and psychological well-being.

Global Health and Disparities Path of Excellence, University of Michigan Medical School

THL became a partner with UMMS in implementing a new pilot cocurriculum designed to supplement the existing medical school curriculum. The Global Health and Disparities Path of Excellence (GHD Path) provides medical students with the opportunity to self-select for self-directed and group learning, faculty mentorship, experiential learning, and opportunities in research in international health or in underserved US communities. THL's global health informationist became a collaborator in developing predeparture orientation, classes, lectures, research consultations, and online information resource materials for GHD Path students. Additionally, by working with UMMS's Global REACH, a unit "created to help facilitate and promote UMMS international initiatives in research, education, and collaborations in health" [4], THL has connected with students on independent learning experiences who are in need of information resource instruction.

As a lecturer for the GHD Path lecture series, the global health informationist provided an introductory fall term lecture, "The World at Your Fingertips: Data, Tools and Strategies in Global Health." Students were introduced to relevant global health and multidisciplinary information sources just at the time they were beginning to prepare and discuss proposals for summer internships and capstone projects before going on international research and learning experiences. Additionally, THL provided small group and individual consultations for GHD Path students and faculty, and established research resources for predeparture students through the customized LibGuide, "GHD Path of Excellence: An Information Resource Starter Kit" (Figure 1, online only). THL's global

health informationist was also integrated into the GHD Path faculty planning team as the "GHD information resource faculty lead."

University of Michigan School of Nursing

UMSN has become a significant predeparture training collaborator with THL. THL has been involved in curriculum-integrated instruction, has partnered with the director of UMSN Global Outreach on development of new learning opportunities, and has provided predeparture training in multiple formats (e.g., in-person, lecture, consultations, online). THL continues to work closely with global health faculty to understand UMSN students' global health information needs.

THL informationists began to lecture as course-integrated instructors in senior-level global health nursing courses, including courses in which students were preparing for international experiences: Nursing 420 ("Perspectives in Global Health"), Nursing 421 ("Introduction to Global Health: Issues and Challenges"), and Nursing 456 ("Community Health Nursing"). In these courses, nursing students used the knowledge that they gained in their coursework on international summer internship experiences. By preparing students in effective information seeking and recommending global health resources for assignments focused on issues surrounding social determinants of health and the United Nations Millennium Development Goals, THL's global health informationist prepared students for not only study abroad, but also for lifelong learning and contributed to efforts to nurture global citizenship. Students enrolled in Nursing 421 have contributed to maternal health research in Ghana, and selected students in Nursing 420 and Nursing 456 have taken part in community assessment and health promotion in Ecuador.

Information skills predeparture training has been conducted via course-integrated instruction, brown bag demonstrations, individual consultations, lecture series and symposia, travel and safety predeparture orientations, and LibGuides and other web-based content (Table 1). Predeparture information skills training can be provided through course-integrated instruction, lectures and symposia, online resources, or demonstrations. However, in regard to retention and effectiveness, it is not surprising that the individual (i.e., one-to-one) consultation is the most effective. The global health informationist has regularly provided in-depth predeparture resource consultations to undergraduate students, graduate students, faculty, and health professionals.

PROGRAMMATIC CONTENT

To be successful in their information gathering, students engaged in global health need to fully recognize the interdisciplinary nature of global health. Global health covers a wide range of areas of study and perspectives. Students need to be introduced to multidisciplinary and interdisciplinary information sources

Table 1
Taubman Health Sciences Library's predeparture training

Course-integrated instruction	Lecturing with an existing course one or more times as well as providing instructional and reference services
Student/faculty demonstrations	Faculty meetings, small student groups, open brown bag lunches
Individual consultations	Consultations are more popular with students who are taking part in international research trips and want to reflect more upon their projects and cover topics such as: What information sources do they need when they are abroad? What information sources do they need to prepare to do their research and/or create learning experiences with scholars they may work with while abroad? What information-seeking management strategies will be most effective?
Lecture series and symposia	Invitations to take part in both university-led and student-led symposia to provide presentations on global health information resources and information-seeking strategies
Predeparture orientations	Awareness of information resources and the global health LibGuide
Online resources and LibGuides	Purchasing and creating electronic resources to fulfill global health information needs

that can easily be overlooked in favor of more "traditional" health sciences sources. Global health addresses health, public policy, economics, social work, engineering, environmental sciences, business, law, women's studies, and more. Depending on the nature of their international experiences, U-M's global health students need to be aware of scholarly databases such as Tropical Diseases Bulletin, Women's Studies International, Public Affairs Index, Social Work Abstracts, and EconLit.

In developing content for the curricula described above, the global health informationist has emphasized the significance of a well-designed research question and application of interdisciplinary information to investigate the answer (Figure 2, online only). Evidence-based strategy is just as relevant in global health as it is in the clinical setting.

THL's generalized predeparture information training provides an opportunity to investigate relevant and interdisciplinary scholarly databases; explore epidemiology international health data and statistical sources (e.g., GIDEON, World Health Organization Global Health Observatory); become aware of mapping and data visualization tools (e.g., Gapminder, World Bank Open Data); recognize the significance of global news sources and international news databases (e.g., Access World News, World News Connection, Google News' international editions); focus on what is being reported and considered of national significance by media sources in the countries they would be visiting; access country profile data, both to find health-related information and to learn of a country's cultures, political climate, economics, and history to put their learning experiences in context; and learn about mobile applications that could potentially be useful to them during their time "in-country" (Figure 3, online only).

General predeparture information resource training consists of:

- "Going to the Source: Scholarly Databases"
- "Just the Facts: Exploring Statistics"
- "Seeing Is Believing: Data Visualization and Mapping Tools"
- "Ear to the Ground: Global News Sources"
- "Where in the World?: Country Profiles"
- "Taking It with You: Mobile Applications for Global Health"

ASSESSMENT

In May 2013, the library surveyed medical students who had self-selected to be a part of the GHD Path.

Many students surveyed were scheduled to undertake internships or experiential learning experiences in summer 2013. The survey's main objective was to better understand students' personal attitudes toward their information-seeking behaviors. The library wanted to know "what they think they know." Of the 35 students responding, 49% were confident in their ability to locate information sources to support their GHD Path information needs. Interestingly, when asked to identify the information resource that they used most commonly to conduct research, the majority of students limited their responses to PubMed and Google Scholar. In terms of health sciences research, these are certainly relevant sources. However, when asked to identify the type of information resources that they needed to learn more about to enhance their GHD Path experience, 71% of students surveyed indicated the need to learn more about health data or statistical sources, 69% indicated epidemiology sources, 69% indicated governmental or nongovernmental organization (NGO) sources, and 66% indicated policy sources.

Regular evaluation of SPH predeparture training sessions were done in the last 2 years. In 2012, 86% of students indicated that library predeparture training was either "very helpful" or "somewhat helpful."

A qualitative evaluation of library predeparture training at UMSN was done through observation of information-seeking behavior of nursing students. Course instructors reported that students in Nursing 421 ("Perspectives in Global Health") and Nursing 456 ("Community Health Nursing") showed a much greater awareness of appropriate sources of information as demonstrated in their preparatory research for their activities in Ecuador. Students were able to more successfully complete a preliminary community assessment before arriving "in-country" after being introduced to customized LibGuides, hands-on computer workshops, and course-integrated instruction. Additional assessment for Nursing 456 is ongoing.

Additionally, students who had taken part in predeparture training are sharing their various perspectives and their own uses of information resources—predeparture, during their in-country experiences, and upon their return—in evaluations, with instructors, and with the informationist. An SPH student expressed an opinion on his evaluation form that many students attending the SPH predeparture information skills sessions share:

The library presentation was most beneficial to me...I am always looking for resources and information to aid in improving student design and maximizing future benefit, so I was glad to learn of additional resources at my fingertips, that I had no previous knowledge of.

A GHD Path medical student provided open feedback in the 2013 survey:

I am glad that we will have the opportunity to learn more about resources for conducting GHD-related research because I feel that I have little knowledge in this area and realize that it will be very valuable to me in the future, both within the GHD path and throughout medical school in general.

CONCLUSION

THL Global Health has laid a foundation for predeparture training and will need to continue to remain relevant in predeparture orientations. The future challenge is to not only continue working with faculty and in international health courses to provide predeparture information skills training, but also to sustain THL's success by reaching out to the growing number of programs and global health initiatives as global health at U-M continues its rapid growth. THL is challenged to not only conduct library-led evaluations, but also to integrate evaluation of information-skills training in courses and initiatives themselves for improved in-context understanding of the instruction that THL provides.

Predeparture training has been an effective means for further integration into global health initiatives in U-M health sciences schools and programs. Continuous communication with faculty, program directors, and faculty advisors involved in global health internships and experiential learning has aided in creating recognition of THL's significant contribution to global health on campus.

THL's Global Health program's future steps include partnering to internationalize the UMSN nursing curricula, making a case for broadening faculty training and development opportunities, continuing

to assess lifelong learning needs of global health researchers and scholars, and striving to partner with our schools to develop digital tools and online education for appropriate settings.

U-M is active in research, teaching, and learning around the world with a significant portion of our global engagement focused on global health. THL has established a foundation within U-M Global Health initiatives. As THL forms global health collaborations, it is fulfilling the U-M commitment to graduating global citizens. THL's Global Health program is involved in and is becoming increasingly recognized for taking part in U-M's international global health collaborative platforms.

REFERENCES

1. Merson MH, Chapman Page K. The dramatic expansion of university engagement in global health: implications for U.S. policy. a report of the CSIS Global Health Policy Center. Washington, DC: Center for Strategic and International Studies (CSIS); 2009.
2. The Regents of the University of Michigan. International initiatives [Internet]. Ann Arbor, MI: Office of the President, University of Michigan [cited 29 Apr 2013]. <<http://president.umich.edu/init/init6.php>>.
3. United Nations Educational, Scientific and Cultural Organization (UNESCO). Communication and information: information literacy [Internet]. The Organization [cited 10 Nov 2013]. <<http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/information-literacy/>>.
4. The Regents of the University of Michigan. About Global REACH: vision [Internet]. Ann Arbor, MI: University of Michigan Medical School; 2012 [cited 10 Nov 2013]. <<http://globalreach.med.umich.edu/about/>>.

AUTHOR'S AFFILIATION

Gurpreet K. Rana, MLIS, preet@umich.edu, Global Health Coordinator, Taubman Health Sciences Library, University of Michigan, 1135 East Catherine Street, Ann Arbor, MI 48109-2038

Received November 2013; accepted December 2013