

Mellanye Lackey, MSI; Susan Swogger, MLIS; Kathleen A. McGraw, MA, MLS

See end of article for authors' affiliations.

DOI: <http://dx.doi.org/10.3163/1536-5050.102.2.006>

This paper describes how a large, academic health sciences library built capacity for supporting global health at its university and discusses related outcomes. Lean budgets require prioritization and organizational strategy. A committee, with leadership responsibilities assigned to one librarian, guided strategic planning and the pursuit of collaborative, global health outreach activities. A website features

case studies and videos of user stories to promote how library partnerships successfully contributed to global health projects. Collaborative partnerships were formed through outreach activities and from follow-up to reference questions. The committee and a librarian's dedicated time established the library's commitment to help the university carry out its ambitious global agenda.

BACKGROUND

The Health Sciences Library (HSL) at the University of North Carolina (UNC) at Chapel Hill has historically provided traditional library services to support global research and education for the health affairs schools that it serves (dentistry, medicine, allied health, nursing, pharmacy, and public health). Services have included helping users find international information for grants and papers; adding books, journals, and databases to support increasing demand for international information; maintaining a guide to international health internships and service opportunities; and serving on a global health committee in the university's health affairs schools.

In 2002, clinicians working with the UNC Project-Malawi, a collaboration between UNC-Chapel Hill and the Malawi Ministry of Health, asked librarians at HSL to help create an onsite medical library to support the information needs of students, clinicians, and researchers at UNC's Tidzwe Center, the Kamuzu Central Hospital, and the Malawi College of Health Sciences. An HSL librarian traveled to Malawi to work with a Malawian librarian to plan the library space, identify information needs, and assess options for accessing online information. Together, they created a library that quickly grew into a vibrant, appreciated center of learning for the region. This experience expanded HSL's global vision and stimulated an interest in exploring new collaborations.

In 2007, UNC-Chapel Hill administration named global engagement as an official mission of the university, and HSL administration noted the university's growing interest in promoting its global presence. In the same year, the chancellor established the Institute for Global Health and Infectious Diseases, charged with supporting and expanding the university's existing research footprint in over seventy countries [1]. He also established the Global Leadership Circle, a task force of alumni, friends, faculty, and administrators committed to studying the strengths, gaps, and potential opportunities for UNC-

Chapel Hill to become a top global university [2]. Additionally in that year, the School of Public Health was renamed the Gillings School of Global Public Health to recognize a generous financial commitment, which partially supported expanding global education and research. HSL administrators wanted to respond to the growing global focus of the university by articulating ways that the library could partner with UNC-Chapel Hill researchers, clinicians, and educators in settings around the world. HSL defined its long-range vision in 2008 to become a "leader in the global health information network," which informed the library's strategic plan for 2008-2013. One goal of this vision was to explore new roles in global outreach for health sciences libraries and librarians.

LITERATURE REVIEW

UNC-Chapel Hill's interest in expanding global health education and research parallels similar goals at many other North American academic institutions [3]. One of the drivers of this change is the increased interest in global experience and knowledge on the part of North American health affairs students and residents [4-6]. A growing body of literature examines the value and ethics of international experiences in the education of health professionals. For example, a recent systematic review in nursing identified twenty-three studies published from 2003 to 2010 related to this topic [7]. While reviewing this body of literature is beyond the scope of this paper, it is important that librarians who become involved in global health outreach seek out these evaluations. Reviews often include discussions about how to create collaborations that benefit all participants.

The literature about global health librarianship is limited. Madge and Plutchak identified key issues in health sciences libraries' international partnerships and reported on activities of library professional associations to address these issues [8]. Murphy used a model of the impact of globalization on health to analyze the impact of globalization on health information professionals [9]. The National Library of Medicine reported on the international impact of PubMed, MedlinePlus, and a partnership with Afri-

* Based on a paper presented at MLA '13, 113th Annual Meeting of the Medical Library Association; Boston, MA; May 3-8, 2013.

can medical journal editors [10]. Studies by the University of Pennsylvania–University of Botswana Partnership about mobile phone access to information included participation from a health sciences librarian and demonstrated a model of an international interdisciplinary research team [11, 12].

Access to full-text, published health literature is a significant problem in resource poor countries, and librarians who are preparing to undertake global health outreach need to be aware of several programs that address this issue. The World Health Organization (WHO) partners with major publishers in the HINARI Access to Research in Health Programme to provide no- or low-cost institutional access to selected online journals and books [13–15]. The International Network for the Availability of Scientific Publications (INASP) provides access to international literature and supports regional publishers [16, 17]. The WHO Blue Trunk Library project offers print materials to local health workers, many of whom lack computers or reliable access to electricity [18, 19]. The eGranary Digital Library, “The Internet in a Box” from the WiderNet Project, captures web content to place on local area networks in regions with no or limited access to the Internet [20]. Project Health Information For All 2015 (HIFA2015), an international collaborative group, works to assure that everyone has access to basic information required for health [21, 22].

METHOD

HSL’s Library Management Council created the Vision Task Force for a Global Health Information Strategy in August 2008. Members from all library departments undertook helping HSL create an overarching global health information strategy and set a one-year time frame to complete their work. The task force included a National Library of Medicine Fellow with dedicated time to conduct internal and external environmental scans and background research. The task force, chaired by HSL’s director, met monthly to discuss and begin forming a strategic response. The pace deliberately allowed time for careful thought, reflection, insight, planning, discussion, and decision making. During that year, the task force was further informed by the Strategic Roadmap to Globalize UNC–Chapel Hill, published in March 2009 [23].

In their final report, a *White Paper for a Health Sciences Library Global Office*, the task force made recommendations for several long-term goals to guide the library’s development as a global health information leader:

- build HSL’s capacity to be a global leader,
- raise HSL’s visibility on campus and beyond as a rising global health information leader,
- expand HSL’s global outreach,
- connect global and local services,
- address information disparities among global health information users, and
- create a “roadmap” for going forward, identifying needed resources and a locus of responsibility within HSL for global health [24].

Upon receiving the report, library management appointed an advisory committee with membership drawn from all library departments and charged it with articulating specific goals, objectives, and actions to assure ongoing efforts toward achieving the broad goals recommended by the task force. Library management also appointed a director for the committee and designated 20% of that person’s job to the committee to assure that global health leadership responsibilities were recognized and made accountable. The committee’s director named the group “Global Engagement at the Health Sciences Library.” Establishing Global Engagement at HSL positioned the library to move beyond traditional services and into pursuing new roles and building collaborative partnerships.

The director of global engagement started by creating a logic model to define desired goals, objectives, activities, needed resources, and potential immediate, short-term, and long-term outcomes. The model included strategic priorities that were presented to groups such as the library’s board of directors, health affairs groups, and potential funders. Working from the goals described above, the committee established policies for prioritizing requests for library involvement in global health projects and for pursuing proactive library outreach to campus global health groups.

Promoting the library’s commitment to global health and articulating possible library roles is an important step in creating potential collaborations. The committee quickly produced outreach materials to engage global health researchers and practitioners. A website presented case studies showcasing the benefits of partnering with the library. Promotional videos featuring high-level health affairs administrators describing the impact of librarian participation in university global health projects were added [25]. The testimonials from the perspective of HSL’s users strongly supported HSL’s outreach efforts.

OUTCOMES

Global Engagement at HSL was created with a broad charge focused on exploration and partnership. Wording in the original charge included “explore creative ways to assure that health knowledge becomes more universally available” and “seek collaboration.” As a result, global health at the library is both business as usual and completely new and different. Traditional library services like reference, collection development, clinical librarianship, and liaison services continue, but new roles like data management, visual literacy education, and outreach to specific global health projects on campus are being explored. Based on this broad charge, a successful outcome is defined as increasing knowledge of what is required for successful library global health outreach.

LESSONS LEARNED

During the group’s first year, it became apparent that the group needed a budget for outreach activities. The

global engagement director had missed an opportunity to conduct an onsite needs assessment with a research group that had requested assistance with creating a library in another country because neither the researchers nor the library had money available for librarian travel expenses. HSL now allocates \$2,500–\$5,000 per year for global engagement. A lesson learned in these projects is that travel to the project location to develop relationships and build understanding of the partners' work and environment is very important for success.

It also quickly became clear that effective Global Engagement at HSL would not be accomplished by a 20% full-time equivalent (FTE) supported only by advisory committee members with little time to spare from their many other responsibilities. The director of global engagement built capacity to accomplish work by supervising several students enrolled in the Field Study Program at the UNC–Chapel Hill School of Library and Information Science. Currently, 2 students per semester spend 9 hours per week, tripling the amount of time previously spent on global health engagement. Each student selects specific activities and learning objectives that meet the priorities of the library.

The most long-standing global initiative at HSL is the Project Library at the Tidzwe Hospital in Lilongwe, Malawi. UNC–Chapel Hill has committed to supporting medical education and improving health in Malawi. Building the library was pivotal to the success of those efforts. The collaboration in Malawi touches every part of HSL, from reference to education and from collection development to licensing agreements.

Another collaboration opportunity arose in 2012, when university administration announced "water" as a campus theme. The UNC Water Institute is campus-based with projects that are global in scope, reaching a broad audience of water scholars and practitioners. This partnership began with a conversation between a faculty member in the UNC Gillings School of Global Public Health and an HSL librarian. It eventually led to multiple layers of support for the Water Institute, including:

- teaching systematic review search techniques;
- offering bibliographic instruction on water databases;
- creating library subject guides for water, sanitation, and hygiene;
- advising on the implementation of data management plans; and
- improving access to online resources in the library's collection.

The partnership will continue as HSL librarians take on new roles and responsibilities in order to meet the group's broader information needs.

Still another collaborative partnership is the library's engagement with UNC Hospital's efforts in Uganda that started with a simple request for health information by two pediatric surgeons about the state of medical education in that country for an upcoming medical mission. After fulfilling the initial information need, the librarian asked follow-up questions that quickly revealed other ways librarians could support the mission. Recognizing the value of the librarian's

contribution, the surgeons invited her to accompany them on the mission. While abroad, the librarian investigated available educational technologies, provided daily clinical information support such as drug dosage information, identified relevant articles, shared bibliographies, and resolved technological challenges. Support for the mission continued when the group returned stateside with the development of a subject guide featuring medical and nursing education in Uganda. The medical mission team also uses rooms in HSL for high-speed Internet connectivity and advanced technology to stream and record medical education lectures for their Ugandan counterparts.

DISCUSSION

Success has not been measured by predefined outcomes because the librarians involved in global health engagement simply did not have any idea of what to realistically expect. Each engagement project with the global health community at UNC–Chapel Hill teaches valuable lessons about the information needs and challenges of users.

One indicator of success is when a relationship that began with a request for traditional library services blossoms into an ongoing collaborative partnership. The UNC Project Library in Malawi began when principal investigators asked for access to electronic journals. Similarly, the Uganda project started with a reference question about medical education. The partnership with the Water Institute originated with a request for instruction. Success is defined by the process of stepping into the unknown, a process that begins when librarians look beyond the original request and ask what they can do to become participants in their users' work to solve global health problems.

Requests for partnerships based on users' knowledge of HSL's previous successes do not always lead to ongoing partnerships. For example, UNC faculty at a permanent research outpost in Nicaragua asked HSL to create a library based on the Malawi model. However, the faculty could not provide funds for a librarian to travel to Nicaragua to conduct a needs assessment or guarantee continued support for a library. As an alternative, HSL identified information resources and enabled access to those resources for the UNC Nicaraguan research partners.

Furthermore, partnerships do not always develop as planned. For example, an early outreach effort to help strengthen public health education in Hanoi, Vietnam, with an online information resource guide had the support of an enthusiastic UNC faculty member and an interested Vietnamese partner; however, the project never launched. The financial crisis in the United States, needs beyond HSL's capacity, and the retirement of the faculty member ended the project at the idea phase. This exploration taught HSL staff to seek out collaborations with larger research groups so that projects do not depend on a partnership with one person. It also provided an understanding of how difficult it is to build a new project across large distances and cultural differences.

REPLICABILITY

Our model of capacity building for global health engagement is definitely replicable in other libraries. HSL used a small amount of dedicated staff time, volunteer student labor, a small budget, and an advisory committee to build new global health partnerships.

CONCLUSION

What does it mean for a library to commit to being a global health information leader? For HSL, it has meant committing a reasonable amount of time and money for exploration, creating an organizational structure charged with pursuing this goal, working to identify opportunities to partner with university global health projects, and promoting HSL's willingness to pursue both traditional and novel solutions to meet the information needs of HSL's partners. A critical factor to the success and development of global engagement has been the ability of HSL staff to learn from the global health information projects. Global health information leadership is still a vision, an ideal that is being pursued by seeking out and responding to opportunities for global engagement.

REFERENCES

1. News Services, University of North Carolina at Chapel Hill. Institute for Global Health and Infectious Diseases aims to improve lives [Internet]. Chapel Hill, NC: The University [cited 11 Oct 2013]. <<http://www.unc.edu/news/FYI/globalinstitute1007.html>>.
2. UNC Global. Global strategy [Internet]. Chapel Hill, NC: University of North Carolina at Chapel Hill [cited 11 Oct 2013]. <<http://www.global.unc.edu/about/2817-2/>>.
3. Macfarlane SB, Jacobs M, Kaaya EE. In the name of global health: trends in academic institutions. *J Public Health Policy*. 2008 Dec;29(4):383–401.
4. Drain PK, Holmes KK, Skeff KM, Hall TL, Gardner P. Global health training and international clinical rotations during residency: current status, needs, and opportunities. *Acad Med*. 2009 Mar;84(3):320–5.
5. Drain PK, Primack A, Hunt DD, Fawzi WW, Holmes KK, Gardner P. Global health in medical education: a call for more training and opportunities. *Acad Med*. 2007 Mar;82(3):226–30.
6. Merson MH, Page KC. The dramatic expansion of university engagement in global health: implications for U.S. policy [Internet]. Washington, DC: CSIS Global Health Policy Center; 2009 [cited 11 Oct 2013]. <[http://dspace.cigilibrary.org/jspui/bitstream/123456789/26577/1/The Dramatic Expansion of University Engagement in Global Health.pdf?1](http://dspace.cigilibrary.org/jspui/bitstream/123456789/26577/1/The%20Dramatic%20Expansion%20of%20University%20Engagement%20in%20Global%20Health.pdf?1)>.
7. Kulbok PA, Mitchell EM, Glick DF, Greiner D. International experiences in nursing education: a review of the literature. *Int J Nurs Educ Schol*. 2012 Jan;9(1):1–21.
8. Madge B, Plutchak TS. The increasing globalization of health librarianship: a brief survey of international trends and activities. *Health Info Lib J*. 2005 Sep;22, (suppl 1):20–30.
9. Murphy J. Globalization: implications for health information professionals. *Health Info Lib J*. 2008 Mar;25(1):62–8.
10. Royall J, Lyon B. Sea-change or change challenge? health information access in developing countries: the U.S. National Library of Medicine experience. *Afr Health Sci*. 2011 Sep;11(3):457–63.
11. Goldbach H, Chang AY, Kyer A, Ketshogileng D, Taylor L, Chandra A, Dacso M, Kung SJ, Rijken T, Fontelo P, Littman-Quinn R, Seymour AK, Kovarik CL. Evaluation of generic medical information accessed via mobile phones at the point of care in resource-limited settings. *J Am Med Inform Assoc*. 2013 Mar 27 [Epub ahead of print].
12. Chang AY, Ghose S, Littman-Quinn R, Anolik RB, Kyer A, Mazhani L, Seymour AK, Kovarik CL. Use of mobile learning by resident physicians in Botswana. *Telemed J E Health*. 2012 Jan–Feb;18(1):11–3.
13. Aronson B. Improving online access to medical information for low-income countries. *N Engl J Med*. 2004 Mar 4;350(10):966–8.
14. Katikireddi SV. HINARI: bridging the global information divide. *BMJ*. 2004 May 15;328(7449):1190–3.
15. HINARI Access to Research in Health Programme. About HINARI [Internet]. Geneva, Switzerland: World Health Organization [cited 11 Oct 2013]. <<http://www.who.int/hinari/about/en/>>.
16. Smart P. International Network for the Availability of Scientific Publications: facilitating scientific publishing in developing countries. *PLoS Biol*. 2004 Nov;2(11):e326.
17. INASP [Internet]. Oxford, UK [cited 11 Oct 2013]. <<http://www.inasp.info/en/>>.
18. Mouhouelo P, Okessi A, Kabore MP. Where there is no Internet: delivering health information via the Blue Trunk Libraries. *PLoS Med*. 2006 Mar;3(3):e77.
19. Department of Knowledge Management and Sharing (KMS). Blue Trunk Libraries [Internet]. Geneva, Switzerland: World Health Organization [cited 11 Oct 2013]. <<http://www.who.int/kms/initiatives/bluetrunk/en/>>.
20. eGranary Digital Library [Internet]. WiderNet Project [cited 11 Oct 2013]. <<http://www.widernet.org/egranary/>>.
21. Smith R, Koehlmoos TP. Provision of health information for all. *BMJ*. 2011 Jan;342:d4151.
22. Healthcare Information For All 2015 [Internet]. Global Healthcare Information Network [cited 11 Oct 2013]. <<http://www.hifa2015.org/>>.
23. UNC Global. Strategic roadmap for globalizing UNC–Chapel Hill [Internet]. Chapel Hill, NC: University of North Carolina at Chapel Hill; 2009 [cited 11 Oct 2013]. <<http://global.unc.edu/files/2013/03/BOT-Approved-Global-Roadmap-March-2009.pdf>>.
24. Health Sciences Library, University of North Carolina at Chapel Hill. White paper for a health sciences library global office [Internet]. Chapel Hill, NC: The University [cited 11 Oct 2013]. <<http://hsl.lib.unc.edu/sites/default/files/documents/whitepaper.pdf>>.
25. Health Sciences Library, University of North Carolina at Chapel Hill. Global engagement @ HSL [Internet]. Chapel Hill, NC: The University [cited 11 Oct 2013]. <<http://hsl.lib.unc.edu/global/>>.

AUTHORS' AFFILIATIONS

Mellanye Lackey, MSI, mjlackey@unc.edu, Director of Global Engagement and Public Health Liaison; **Susan Swogger, MLIS**, sswogger@email.unc.edu, Collections Development Librarian; **Kathleen A. McGraw, MA, MLS**, Kate_McGraw@unc.edu, Assistant Department Head for User Services; Health Sciences Library, 335 South Columbia Street, CB# 7585, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7585

Received October 2013; accepted November 2013