Complementary competencies: public health and health sciences librarianship

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Objectives: The authors sought to identify opportunities for partnership between the communities of public health workers and health sciences librarians.

Methods: The authors review competencies in public health and health sciences librarianship. They highlight previously identified public health informatics competencies and the Medical Library Association's essential areas of knowledge. Based on points of correspondence between the two domains, the authors identify specific opportunities for partnership.

Results: The points of correspondence between public health and health sciences librarianship are reflected in several past projects involving both communities. These previous collaborations and the services provided by health sciences librarians at many public health organizations suggest that some health sciences librarians may be considered full members of the public health workforce. Opportunities remain for productive collaboration between public health workers and health sciences librarians.

Conclusions: Drawing on historical and contemporary experience, this paper presents an initial framework for forming collaborations between health sciences librarians and members of the public health workforce. This framework may stimulate thinking about how to form additional partnerships between members of these two communities.

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INTRODUCTION

Recent interest in bio-defense and emergency preparedness has led to increased attention to the public health workforce's activities and, in many cases, has led to increased funding for public health initiatives. This interest is in marked contrast to the late 1980s. In its 1988 report *The Future of Public Health,* the Institute of Medicine (IOM) warned that the public health infrastructure was under increasing strain and concluded, ''Public health is a vital function that is in trouble'' [1]. Although society's investment in public health has fluctuated, over the last fifty years, health sciences librarians have shown steady interest in public health.

This paper provides a framework for understanding the contributions that health sciences librarians make, and could make, toward achieving the goals of the public health community. It presents numerous examples of correspondence between the expertise of public health practitioners and health sciences librarians. These correspondences highlight the rich potential for further collaboration between these two communities.

Although this paper focuses on the intersection of competencies between the health sciences library and public health communities, the authors believe examining the intersection of expertise between librarians and other health care communities would also be fruitful. In addition, the competencies of the Medical Library Association (MLA) provide only one enumeration of librarian expertise. The Special Library Association has also developed competencies, which are particularly relevant for librarians who work in nontraditional health care settings [2].

BACKGROUND

Public health encompasses a wide range of disciplines. Some leading public health occupational classifications are: nurses, administrators, sanitarians, environmental health specialists, dietitians or nutritionists, and public information or health education specialists [3]. A small percentage of this workforce has received graduate level training in public health [4]. For example, a study in Texas has estimated that 7% of its public health workers have formal education in public health [5]. Other research has found that only 22% of the chief executives of local health departments have graduate degrees in public health [6].

Health sciences librarians have a long history of providing specialized services for the public health workforce. In 1955, an issue of the *Bulletin of the Medical Library Association* featured a symposium on types of medical libraries, with an article devoted to public health libraries [7]. Herman, librarian for the Florida State Board of Health, reported that, ''Marked variation is noted among [public health] libraries . . . The purpose, clientele served, the physical setup, and, last but not least, the staff of each individual library contribute to this dissimilarity'' [7]. In addition to enduring heterogeneity in the workforce, a consistent aspect of public health collection development is that it is often in response to pressing needs, such as today's focus on emergency preparedness. Although this strategy may yield a collection of useful resources, a limitation of this approach is that it may be ''impossible to maintain a balanced collection'' [7].

During the fifty years since Herman's publication, health sciences librarians have formalized their connection with the public health community. The genesis of the Public Health/Health Administration (PH/HA) Section of MLA was at the association's 1974 annual meeting. The group evolved into a special interest group in 1975 and has been an MLA section since 1980 [8].

In addition to warning of an overburdened public health infrastructure in the *Future of Public Health,* IOM has also identified the three ''core functions'' of public health: assessment, policy development, and assurance. Assessment requires ''a full understanding of the determinants of health and of the nature and extent of community need''; policy development should ''reflect a full examination of the public interest and sound analysis of problems and interventions''; and assurance is an ''inherent responsibility to take positive action to achieve goals that society agrees upon in the interest of individual justice or for the common good'' [1].

Following publication of the IOM report, Johns Hopkins University's Bloomberg School of Public Health received a grant from the Health Resources and Services Administration in 1989 to develop and convene the Public Health Faculty/Agency Forum. The forum comprised individuals from the academic and public health practice communities, and its purpose was to help bridge the gap between academic training and public health practice. This body has evolved into a consortium known as the Council on Linkages Between Academia and Public Health Practice. In 1991, the forum published the first set of ''universal competencies'' for public health practice [9].

In 1994, the US Department of Health and Human Services (HHS) formed the Public Health Functions Steering Committee, which prepared the statement, ''Public Health in America.'' It includes an illustration of the ten essential services of public health, which map to IOM's three core functions of assessment, policy development, and assurance (Figure 1) [10].

In 1997, the Subcommittee on Public Health Workforce, Training, and Education, a subcommittee of the HHS Public Health Functions Steering Committee, published the first version of the competencies necessary to deliver the ten essential services. These competencies were almost exclusively drawn from the forum's set of universal competencies [11].

In 2001, the council released an enhanced version of the HHS competencies, known as the ''core competencies'' [12]. These sixty-eight competencies cumulate the previous decade's work toward identifying universal competencies for effective public health practice. The eight domains in the council's core competencies include skills in analysis and assessment, policy devel-

Figure 1
Essential public health services
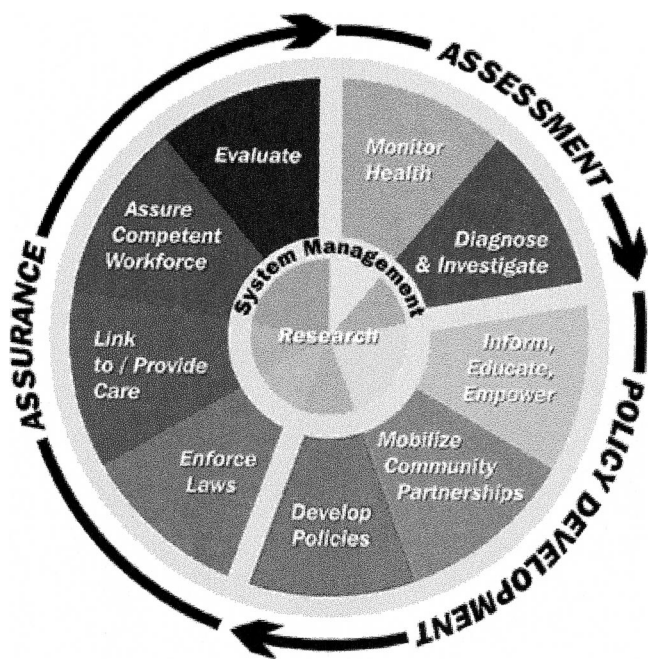
Source: DEPARTMENT OF HEALTH AND HUMAN SERVICES. Public health in America. (Available from: <http://www.health.gov/phfunctions/public.htm>.)

opment and program planning, communication, cultural competence, community dimensions of practice, basic public health sciences, financial planning and management, and leadership and systems thinking [13]. The competencies can be organized by the basis of the essential service they address [14], as well as by the varying levels of proficiency required at different levels of responsibility in an organization [15]. These levels include front line staff, senior level staff, and supervisory and management staff.

In 2003, IOM published *The Future of the Public's Health in the 21st Century,* an update to *The Future of Public Health* [16]. This report noted an improved public health infrastructure in the years since the 1988 report but also the reality that much more improvement was necessary. It included a compilation prepared by the Public Health Practice Program Office, Centers for Disease Control and Prevention (CDC), of the numerous public health competency sets developed following the publication of the 1988 report. This compilation included the numerous discipline-specific competency sets developed in light of the core competencies.

Concurrent with the development of public health competencies throughout the 1990s, the potential of the Internet to improve access to information for members of the public health workforce became increasingly evident. This potential was a key theme in the recommendations from an April 1995 colloquium, "Making a Powerful Connection: The Health of the Public and the National Information Infrastructure," organized by the Office of the Assistant Secretary of

Health, HHS, CDC, and National Library of Medicine (NLM) [17]. Responding to these recommendations, in 1997, NLM and CDC spearheaded a partnership dedicated to improving information access for public health, now known as the Partners in Information Access for the Public Health Workforce [18]. The partners currently comprise twelve member organizations, including MLA, which collaborate in developing information resources for the public health workforce. Notable among these resources is the partners' Website [19].

In 1998, NLM and the New York Academy of Medicine (NYAM), with additional support from the IBM Foundation, cosponsored a forum, "Accessing Useful Information: Challenges in Health Policy and Public Health." Papers from the forum appeared as a special feature in the December 1998 *Journal of Urban Health* [18]. This forum provided an opportunity for health sciences librarians to reflect on how to support the information needs of the public health workforce.

In a survey conducted by NYAM prior to the forum, respondents in the fields of public health, health policy, and library science identified several challenges to obtaining information to support work in public health and health policy. These challenges included difficulties related to finding relevant information, identifying and using information resources, assessing the quality of information, and communicating the need for useful information services to policymakers, health professionals, and members of the general public [18]. The forum highlighted existing resources that could partially address these needs.

The forum established three high-priority goals for improving access to information in the public health and health policy communities:

■ support problem definition and problem solving in the public health and health policy communities by more effectively synthesizing, sifting, and structuring information to meet the needs of various audiences;
■ train the public health and health policy workforce to use information effectively and provide them the support of skilled librarians and information specialists; and
■ garner support for a sustainable public health and health policy information infrastructure [18].

To fulfill the second goal of training, NLM funded twenty-seven outreach projects targeted to the public health community through the National Network of Libraries of Medicine [18]. This funding was provided as part of the Partners in Information Access for the Public Health Workforce initiative. Because of the diversity of the public health community, these projects took place in a variety of settings.

Interventions conducted through these projects included training, developing Websites, and providing computer hardware and Internet service provider (ISP) accounts. Other services provided for public health workers included document delivery and reference and current awareness services. Additional information about these projects is available from the partners' Website [20].

In April 2001, the partners brought together many of the project directors for a two-day Public Health Outreach Forum to discuss methods of outreach to the public health workforce. A special report about the forum appeared in the October 2001 *Bulletin of the Medical Library Association* [21]. A key finding was that the most effective outreach depended on a thorough understanding of the information needs of the public health workforce, possibly through an iterative assessment of these needs. Another important conclusion was that although information outreach is valuable in its own right, it does not necessarily indicate a partnership between health sciences librarians and public health practitioners. Without taking additional steps to form lasting partnerships, even the best information outreach could be perceived as a one-way service rather than as a collaboration based on shared goals.

INTERSECTION OF PUBLIC HEALTH COMPETENCIES AND EXPERTISE OF HEALTH SCIENCES LIBRARIANS

One way to begin lasting partnerships is to identify intersections between the expertise of members of the public health workforce and of health sciences librarians. This section of the paper describes many projects that have capitalized on these intersections.

As noted previously, analysis of the core competencies has stimulated the development of discipline-specific competency sets. Of particular interest for health sciences librarians are the informatics competencies from O'Carroll and the Public Health Informatics Competencies Working Group published by the Northwest Center for Public Health Practice (NWCPHP) in 2002 [22]. This set groups competencies into three broad classes: those involving the effective use of information, the effective use of information technology, and the effective management of information technology projects. With the exception of the final one, the twenty-four competencies pertaining to the effective use of information are drawn verbatim from seven of the eight domains in the council's broader set of core competencies [23]. The second and third classes present additional competencies specific to public health informatics.

For health sciences librarians, the "essential areas of knowledge" developed by MLA identify the types of expertise required of information professionals practicing in health sciences settings. These areas first appear in *Platform for Change,* MLA's 1991 educational policy statement [24], and are now integral to the review process for membership in the Academy of Health Information Professionals [25]. MLA's essential areas of knowledge are divided into seven domains of expertise: health sciences environment and information policies; management of information services; health sciences information services; health sciences resource management; information systems and technology; instructional support systems; and research, analysis, and interpretation.

Some of the points of correspondence between the competencies required of health sciences librarians and the informatics competencies required of members of the public health workforce are discussed below and summarized in two tables. This exploration of correspondences is illustrative rather than comprehensive.

Table 1 lists the twenty-four class 1 informatics competencies published by NWCPHP, which refer to the effective use of information. It also identifies the public health informatics competencies domain in which each competency belongs.

Table 2 presents examples of correspondence between the domains of the public health informatics competencies and MLA's essential areas of knowledge. It presents a selected public health competency from each of the informatics domains and links each to the various types of expertise demonstrated by health sciences librarians. Examples of partnerships between the public health and health sciences library communities are also identified.

Analytic and assessment skills

Public health informatics competency. An informatics competency in the domain of analytic and assessment skills is the ability to extrapolate from specific pieces of data to the broader socioeconomic trends that these data reflect. A challenging public health endeavor that requires sophisticated approaches to analysis, assessment, design, and implementation is the Healthy People 2010 (HP2010) initiative. HP2010 is an effort coordinated by HHS, with the goals of improving life expectancy and quality of life and eliminating health disparities by 2010 [26]. In the context of twenty-eight focus areas, HHS works with other federal agencies to coordinate activities to achieve the goals of HP2010. Monitoring progress in each area requires the ability to interpret and synthesize data regarding specific health indicators, in relation to particular initiatives. In addition to achieving success within their own framework, these initiatives should also relate to the larger aims of HP2010 [27].

Medical Library Association (MLA) essential area of knowledge. Expertise regarding the health sciences environment and information policies requires understanding the "contexts in which the need for biomedical and related information emerges and the unique ways of perceiving and interpreting these environments" [24]. In addition to forming a habit of staying abreast of important developments, achieving such a sophisticated understanding requires numerous skills in conducting and interpreting research.

In the early 1980s, health sciences librarians collaborated with physicians in an environmental scan of the changes in information and health care environments associated with the increased use of computers [28]. Although this assessment was more limited in scope than HP2010's goal of improving health conditions in the United States, both endeavors require an understanding of broader societal dynamics and benefit by the active participation of health sciences librarians.

Table 1
Class 1 public health informatics competencies: effective use of information

Public health informatics competency domain	Public health informatics competency
Analytic and assessment skills	■ Determines appropriate uses and limitations of both quantitative and qualitative data ■ Evaluates the integrity and comparability of data and identifies gaps in data sources ■ Applies ethical principles to the collection, maintenance, use, and dissemination of data and information ■ Partners with communities to attach meaning to quantitative and qualitative data ■ Makes relevant inferences from quantitative and qualitative data ■ Obtains and interprets information regarding risks and benefits to the community ■ Applies data collection processes, information technology applications, and computer systems storage and retrieval strategies ■ Recognizes how the data illuminate ethical, political, scientific, economic, and overall public health issues
Policy development and program planning	■ Collects, summarizes, and interprets information relevant to an issue ■ Utilizes current techniques in decision analysis and health planning
Communication skills	■ Communicates effectively both in writing or orally or in other ways ■ Uses the media, advanced technologies, and community networks to communicate information ■ Effectively presents accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences
Community dimensions of practice	■ Develops, implements, and evaluates a community public health assessment
Basic public health sciences	■ Defines, assesses, and understands the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services ■ Identifies and applies basic research methods used in public health ■ Applies the basic public health sciences including behavioral and social sciences, biostatistics, epidemiology, environmental public health, and prevention of chronic and infectious diseases and injuries ■ Identifies and retrieves current relevant scientific evidence ■ Identifies the limitations of research and the importance of observations and interrelationships
Financial planning and management	■ Manages information systems for collection, retrieval, and use of data for decision making ■ Conducts cost-effectiveness, cost-benefit, and cost-utility analyses
Leadership and systems thinking	■ Identifies internal and external issues that may impact delivery of essential public health services (i.e., strategic planning) ■ Promotes team and organizational learning ■ Manages the information of the public health organization as a key strategic resource and mission tool

Source: NORTHWEST CENTER FOR PUBLIC HEALTH PRACTICE. Informatics competencies for public health professionals. (Available from: <http://healthlinks.washington.edu/nwcphp/phi/comps/>.)

Partnership. Available from the partners Website, the HP2010 Information Access Project is an example of partnership between health sciences librarians and the public health community. Colleagues from NLM, CDC, the Public Health Foundation, health sciences librarians, and public health workers from a variety of organizations have developed preformulated strategies for searching PubMed to glean research that pertains to selected HP2010 objectives. These one-click search strategies became available for every HP2010 focus area at the end of 2004 [29].

Policy development and program planning

Public health informatics competency. A public health informatics competency in the domain of policy development and program planning is the ability to "utilize current techniques in decision analysis and health planning" [23]. In the context of the HP2010 initiative, these are the operational skills that result in innovative and measurable interventions. An essential component of this process is the ability to evaluate the results of health interventions and adjust an approach as necessary.

MLA essential area of knowledge. Among MLA's essential areas of knowledge, management of informa-

tion services includes skills in "project and program management and evaluation" [24]. A key resource for librarians is *Measuring the Difference: Guide to Planning and Evaluating Health Information Outreach,* published by the Pacific Northwest Region of the National Network of Libraries of Medicine in 2000 [30]. As described in *Measuring the Difference,* the major stages of successful information outreach are conducting a community assessment, developing goals and objectives, planning activities and strategies, planning evaluation, gathering data and assessing results, and utilizing and reporting the results. The evaluation and assessment components of this process require skills in research, analysis, and interpretation.

Partnership. Successful public health interventions require effective dissemination of information in addition to coordination of a community's health resources. *Measuring the Difference* can be useful for evaluating the information dissemination component of public health interventions. Health sciences librarians could coordinate information outreach projects with public health promotion campaigns, so that members of the targeted populations know how to remain current about a topic and seek further information.

Table 2
Possible points of correspondence between public health informatics competency domains and MLA essential areas of knowledge

Public health informatics competency domain	Public health informatics competency	MLA #1: Health sciences environment and information policies	MLA #2: Management of information services	MLA #3: Health sciences information services	MLA #4: Health sciences resource management	MLA #5: Information systems and technology	MLA #6: Instructional support systems	MLA #7: Research, analysis and interpretation
#1: Analytic and assessment skills	Recognizes how the data illuminate ethical, political, scientific, economic, and overall public health issues	X						X
#2: Policy development and program planning	Utilizes current techniques in decision analysis and health planning		X					X
#3: Communication skills	Effectively presents accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences			X			X	X
#4: Community dimensions of practice	Develops, implements, and evaluates a community public health assessment	X		X				
#5: Basic public health sciences	Identifies and retrieves current relevant scientific evidence			X	X		X	
#6: Financial planning and management	Conducts cost-effectiveness, cost-benefit, and cost-utility analyses		X					
#7: Leadership and systems thinking	Manages the information of the public health organization as a key strategic resource and mission tool	X	X			X		

Communication skills

Public health informatics competency. The third informatics competency domain is communication skills, and one competency is ''Effectively presents accurate demographic, statistical, programmatic and scientific information for professional and lay audiences'' [23]. Given the large amount of information that public health practitioners must synthesize, this skill requires an ability to interpret the information that will be most relevant to specific audiences, as well as an understanding of the appropriate depth and presentation of this material.

MLA essential areas of knowledge. In the areas of knowledge for health sciences librarianship, similar skills are found in expertise in health sciences information services. Relevant skills include an understanding of ''information seeking and transfer characteristics of user groups and individuals'' and ''analysis, evaluation, and synthesis of information for identified information needs.'' Facets of expertise in instructional support systems include understanding various ''instructional methodologies'' and conducting an ''educational needs assessment and analysis.'' Finally, one aspect of expertise in the knowledge area of research, analysis, and interpretation is familiarity with ''information structure, transfer, and processing'' [24].

Partnership. An example of using these various forms of expertise in health sciences librarianship is the Evidence-Based Practice for Public Health Project at the Lamar Soutter Library of the University of Massachusetts Medical School. Funded by an award from the Association of Teachers of Preventive Medicine and CDC, the project's purpose is to determine the applicability of clinical models for evidence-based medicine to public health. The ultimate goal of this effort is a training program that will introduce public health practitioners to ''evidence-based public health practice and literature retrieval methods'' [31]. Successfully implementing such a program requires understanding the information needs of public health practitioners regarding this topic, as well as awareness of the appropriate depth of the presentations.

Community dimensions of practice

Public health informatics competency. The only competency in the domain of community dimensions of practice is the ability to ''develop, implement, and evaluate a community public health assessment'' [23]. The ''precede-proceed'' framework provides one approach to systematic community assessments and is similar to the model presented in *Measuring the Difference.* The precede portion of the model articulates several facets of a community assessment. These facets

include social, epidemiological, behavioral, environmental, educational, and organizational dimensions. The proceed portion of the model encompasses implementing an intervention and evaluating its process, outcome, and impact [32].

MLA essential area of knowledge. In the context of health sciences librarianship, part of expertise in health sciences information services is developing an assessment of information needs for a specified patron community. This assessment requires broad analytic skills regarding the concerns of a specific community as well as how information resources, services, and policies may impact the community's information needs.

Partnership. One project funded by the Partners in Information Access for the Public Health Workforce that began with an assessment of the information needs of a public health community was Vanderbilt University's outreach to the public health workforce in Tennessee. To benchmark the information needs of Tennessee's public health community, health sciences librarians collaborated with representatives of this community to develop a comprehensive needs assessment. This process included conducting individual interviews and focus groups, as well as consulting with the leadership of various health departments to refine the assessment [33].

Basic public health sciences

Public health informatics competency. The fifth public health informatics competency domain is basic public health sciences, the core of public health practice. A specific competency is "Identifies and retrieves current relevant scientific evidence" [23], and facility in this competency is critical to evidence-based public health, which is continuing to evolve from a model for making clinical decisions to one that works for public health and policy decisions as well. The recent monograph *Evidence-Based Public Health* describes this evolution [34].

MLA essential areas of knowledge. A major role for health sciences librarians is to impart skills in identifying and retrieving authoritative information; many of the specific skills in the areas of health sciences information services and instructional support systems pertain to this role. In addition, several facets of expertise in the area of health sciences resource management are relevant. Effective identification and retrieval of resources requires an understanding of principles related to the "identification and selection of materials and their sources," as well as an understanding of "cataloging and classification theory" and "indexing, abstracting, and classification systems" [24]. Health sciences librarians use this cluster of skills to answer questions about locating the highest-quality information and to instruct patrons in enhancing their own searches.

Partnership. The role of librarians in supporting and fostering evidence-based public health practice is evident in the previously mentioned Evidence-Based Practice for Public Health Project at the University of Massachusetts [31], as well as the HP2010 Information Access Project [29]. It is also evident in the University of Iowa's project, "Healthy Iowans 2010: Integrating Information with Public Health Planning and Delivery." A project completed in 1999 and funded by the Partners in Information Access for the Public Health Workforce, Healthy Iowans 2010 provides a Web-based, state-level counterpart to the national HP2010 initiative [35]. The project involves training Iowa's medical and public health community in effective PubMed and Web searching techniques and provides detailed introductions to Websites that are important to state and local health planning. In addition to promoting evidence-based practice, this project was instrumental in the release of the *Healthy Iowans 2010* report in January 2000 [36].

Financial planning and management

Public health informatics competency. The sixth public health informatics competency domain is in financial planning and management, and one specific competency is facility in, "cost-effectiveness, cost-benefit, and cost-utility analyses" [23]. Success in any public health program or initiative depends on sound financial decision making.

MLA essential area of knowledge. In the area of management of information services, one form of expertise is skill in "finance and budgeting, cost analysis and price setting" [24]. As is the case with efforts in public health, the success of library and information services depends on the wise use of financial resources.

Partnership. A recent article in the *Journal of the Medical Library Association (JMLA)* chronicles the planning process for an Integrated Advanced Information Management Systems–funded partnership between the Regenstrief Institute for Health Care and the Indiana University School of Medicine. The participants envision developing a financially sustainable, self-funding framework for the collection and delivery of critical health information to any hospital or practice site in the Indianapolis Metropolitan Statistical Area. This system will be able to respond to both clinical and public health information needs [37].

Leadership and systems thinking

Public health informatics competency. As noted above, one public health informatics competency is not included in the original core competencies. This competency is in the domain of leadership and systems thinking and is the ability to manage the information of the public health organization as a key strategic resource and mission tool.

MLA essential areas of knowledge. In the context of health sciences libraries, several skills in the domains of health sciences environment and information policies and management of information services support this goal. In addition, one type of expertise in the domain of information systems and technology is an understanding of the ''integration of systems and technology into the long-term information management needs and plans of the institution'' [24].

An example of leadership and systems thinking among health sciences librarians is a recent report from the Association of Academic Health Sciences Libraries, ''Building on Success: Charting the Future of Knowledge Management within the Academic Health Center.'' The major purpose of the report is to delineate the ''pivotal roles of the library and knowledge management in assuring the continued viability and excellence of the nation's premier health institutions'' [38].

Partnership. A recent taxonomy of contributions that library and information services make to hospitals and academic health sciences centers (AHSCs) includes providing leadership in information management [39]. This leadership fosters research and leads to the adoption of innovative technologies and practices in the larger organization. This is not limited to hospitals and AHSCs. A significant example of information management in the public health community is the Pan American Health Organization's (PAHO's) Institutional Memory & Online Catalog [40]. Managed by PAHO librarians, the catalog provides access to approximately 40,000 records of PAHO documents created since the inception of the organization in 1902. More than half of these documents are available in full text through the catalog.

DISCUSSION

The partnerships described above illustrate previous collaborations between the health sciences library and public health communities and point to emerging new opportunities. They collectively address the high-priority information needs identified at the 1998 forum at NYAM [18]. The needs assessment at Vanderbilt University has provided essential background about the information needs of Tennessee's public health community, and the HP2010 Information Access Project provides a practical means of meeting a wide range of information needs. Both the University of Massachusetts and University of Iowa have addressed the training needs of the public health community. Finally, Indiana University's health alerting system and PAHO's institutional memory represent commitments to a sustainable information infrastructure for public health.

A sustainable information infrastructure is essential, because the information needs of the public health workforce are exceptionally diverse and finding information of the same caliber as that available to clinical researchers is challenging [18]. A paper in the recent expert searching symposium in the *JMLA* documents

the versatility required for meeting the information needs of the public health workforce [41].

The variety of bonds between health sciences librarians and the public health community, including the provision of expert search services, raises the question of whether some health sciences librarians are also part of the public health workforce. Many librarians have also earned graduate degrees in public health. In addition, many health sciences librarians are active members of the American Public Health Association (APHA) and have presented at APHA's annual meetings [42].

However health sciences librarians perceive themselves, they have great potential in expanded collaboration with members of the public health workforce. Expanding ties to the public health community increases the possibility for development of products and services that can improve the public's health.

CONCLUSION

In recent years the public health community has made a concerted effort to enumerate core competencies for successful public health practice. During the same period, health sciences librarians have been similarly engaged in defining their essential areas of knowledge. Exciting correspondences exist between many of these public health informatics competencies and the skills essential to being a successful health sciences librarian.

This paper provides one means of framing collaborations between librarians and public health practitioners at the state and local level. The authors hope that it will stimulate thinking about innovative partnerships between these two communities, building on the excellent work already underway.

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