Health Information Services Planning Team Report

January 11, 2010

Background

The Applied Health Sciences Library has a long and distinguished history. It was established in 1949 as the Physical Education Library with the purpose of providing library collections to support activities related to what has become the College of Applied Health Sciences. Since that time, teaching, research, and service related to health has grown beyond the boundaries of AHS, and libraries have evolved dramatically to address many changes, including an emphasis on services rather than collections. The Health Information Services Planning Team was appointed to explore new models for health information services and to align these services to fit the general planning processes occurring at the campus Library. The Team built on the Life Sciences Division Spring 2009 discussions (http://www.library.illinois.edu/nsm/lisd/index.html) and monitored the ongoing work this fall of the Biology and Life Sciences Planning Team (http://www.library.illinois.edu/nsm/biology/index.html). The Team was also mindful of the priority placed on health in both the Campus and Library Strategic Plans as well as the Strategic Goals of the College of Applied Health Sciences (see Appendix B). In particular the Library’s Strategic Plan (2006) identifies a Center for Health Information Support as one of five strategic initiatives. The Health Information Services Planning Team was explicitly charged with planning for the future of health-related library services to faculty, students, and practitioners (See the full charge in Appendix A), and more specifically to do the following:

1. Articulate needs and strengths of those areas of study on the Urbana campus that depend on health information services.
2. Assess overlap and gaps in services that are complementary to health information that exists with library programs in the elsewhere on campus.
3. Involve relevant groups and individuals in the Team's conversations.
4. Identify exemplars and models to provide the most effective Library services and access to health-related information resources.
5. Recommend a plan for ongoing assessment of the effectiveness of the new service profile.

Process of Developing the Team Report

The initial set of meetings were directed at clarifying and explaining the charge, and providing a larger context to understand the charge (Library planning, AHS strategic planning, committee membership, and other planning contexts relevant to disciplines such as nutritional sciences and
After this initial set of meetings, we divided into two subgroups to address the charge: one composed of team members who are faculty with expertise in various aspects of the health sciences (Susan Farner, Kinesiology & Community Health; Charissa Lansing, Speech & Hearing Science; Steven Leigh, Anthropology & Surgery; William Stewart, Recreation, Sport and Tourism; Synthia Sydnor, Kinesiology & Community Health; Kelley Anne Tappenden, Food Science & Human Nutrition; Kenneth Wilund, Kinesiology & Community Health) and one composed of team members who are librarians and library staff concerned with health information (Mary Beth Allen, Applied Health Sciences; Wendy Gregory, Applied Health Sciences; Annie Paprocki, Education & Social Sciences; Beth Sandore, AUL; Mary Shultz, Health Sciences; Linda Smith, GSLIS; Greg Youngen, Veterinary Medicine). Subsequently Allen, Farner, Sandore, Smith, Stewart, and Sydnor worked on integrating findings and developing recommendations for review by the full team.

The faculty subgroup sought to carry out part 1 of our charge:

1. Articulate needs and strengths. The result was an annotated list of core and emerging health information service areas and an enumeration of topical categories that fall within core and emerging health information areas of particular relevance to this campus. This document reflected the collective expertise and experience of members of the faculty group (see Appendix C).

The librarian subgroup sought to carry out parts 2-4 of our charge:

2. Assess overlap and gaps in health information services (see Appendices D, E, F).
3. Develop a broad-based understanding of the existing and emerging needs of information users in these allied disciplines (see Appendix G).
4. Identify exemplars and models (see Appendix H).

A short survey was distributed to all library faculty and staff to assess existing demands for health information and associated services, including collections, instruction, and other services; the audiences reached; and any gaps and challenges (summary of results in Appendix D). In addition UIUC library web pages were analyzed for coverage of health databases and information services; health information literacy considerations were summarized (Appendix E); relevant data were compiled from campus and library sources (Appendix F); a grid was developed based on the list of core and emerging health information service areas identified by the faculty subgroup (Appendix G). This grid sought to identify services existing in the AHS Library and elsewhere in the University Library as well as potential new services for the AHS Library, other library units, and/or in partnership with other campus units. In addition health information service patterns at other large university libraries were analyzed (Appendix H).

Analysis of Data, Surveys, and Campus/Library Contextual Information

The team collected and analyzed new data from several sources and existing data collected through periodic Library surveys and annual statistical reporting in both the Library and through the campus Division of Management Information (DMI). Information was also incorporated from the College of AHS strategic profile, its recent strategic planning process, and from the
profiles of other health-related programs of study in the Colleges of ACES, LAS, and in the School of Social Work. Both campus and Library data indicate that the need for health information services to support both research and learning is increasing on campus, and that this trend will continue, for both core health science fields as well as the interdisciplinary programs that incorporate social science as well as food and human nutrition areas on the Urbana campus.

Mary Beth Allen compiled a summary that described both gate count and books circulated from the current AHS Library, located on the first floor of the Main Library building, as remaining steady, within the top fifteen highest use departmental library sites on campus (see Appendix F). Survey participants in the Library’s 2004 and 2005 user surveys who indicated the AHS Library was a primary library expressed both a strong appreciation for the skilled staff and librarian support. Yet there is also concern that one professional librarian and two full-time support staff are not sufficient to serve growing health-related information needs. The Head of the AHS Library currently conducts 25-30 library instruction sessions per year for AHS undergraduate and graduate classes, and has indicated that there is a growing and unmet need for additional library instruction (see Appendix E). In an informal survey of librarians across Library units the team found that librarians in several other units currently provide public service and/or instructional support for students in health-related areas (see Appendix D).

Further, comments from Library surveys and from an informal AHS Joint Student Council discussion conducted by the College of AHS administration in May 2009 underscore the need for new and expanded health-related services and collections. Student comments noted that existing AHS Library space and hours place limits on effective use of Library collections and services. The current space cannot accommodate the needs of both those wanting quiet for study and those seeking collaborative space for work on group projects. Open hours also do not always match students’ preferred times for work in the library. Students who participated in the informal AHS College Joint Student Council discussion in May 2009 indicated that for a combination of these reasons many of them preferred other library and campus spaces for study to the AHS Library space.

Key Findings and Principles

Based on the team’s data gathering and deliberations, the following findings and principles emerged to guide specific recommendations for a new health information services model:

- **Core academic programs related to health are expanding, and they need new and different types of library services than what can currently be supported by the AHS Library as a self-contained departmental library occupying a separate physical space;**
- **Interdisciplinary programs are also expanding, and similarly they also need new and different types of library services. Specific examples of growing interdisciplinary programs and areas of study on the Urbana campus include the i-Health interdisciplinary undergraduate major; the Center on Health, Aging, and Disability; the new Master’s in Public Health program; and the distance education programs spearheaded by the College of AHS and now LAS (Health Communication).**
- **A core value of the AHS Library has been a focus on student services and its personal approach to facilitating student learning and access. It has been a significant factor in**
promoting a sense of belonging to many AHS students both past and present.

- Within the next 5 years health and wellness information services require the support of a greater number of FTE professionals in order to meet growing needs for curriculum and research support on the Urbana campus;
- The College of Applied Health Sciences faculty and students envision a future service setting that incorporates a strong and vibrant physical space to promote a variety of interactions around information seeking and use in a library setting;
- In keeping with the Library’s New Service Models principles, any future health science and wellness information service scenario is likely to involve a consolidation of space, collections, and services into a Library area that provides more robust services across related disciplines, particularly if this type of collaboration is vital to the sustained support of the subject area(s);
- The UIUC Library seeks to establish a more cohesive and formal relationship with the UIC Library of the Health Sciences that focuses on identifying the ways in which the proposed UIUC health information services can complement the existing UIC LHS service programs. Providing cohesive medical, health science, and wellness information services to faculty and students on both campuses should be a common goal. We seek to ensure access to students, faculty and staff who need critical information resources in medicine, health science, and wellness areas, regardless of campus affiliation.

Recommendations

Although differing opinions were expressed by team members on how best to meet emerging health information services needs, the recommendations that follow reflect the team’s consensus on key points: 1) campus programs related to health and wellness are changing rapidly; 2) the information needs of a growing community of users on the Urbana campus require an increasing amount of close and continuous interaction among librarians across related disciplines and physical library departments; 3) the information landscape in these areas is also changing; 4) given the many-faceted information needs of students, faculty and staff working in the areas of Health Science and Wellness on this campus, the traditional stand-alone departmental library model is not sustainable, and options are limited for adding new services and staff in a resource-constrained and isolated departmental library model. The current stand-alone library model will not easily support needed collaboration across the health-related disciplines to provide effective and forward-looking health information services on the Urbana campus.

The team recognizes that through physical co-location of the AHS Library with library services and resources in other related disciplines, there is the potential for broader collaboration on collection development, service provision, and stronger outreach through instruction and on grant initiatives. It is in this context that the team outlined the following recommendations, which consist of the formation of a Health Science and Wellness Information Center as a part of a larger physical library space that features services from several related discipline libraries. The team considered three scenarios, but favored forming a Health Science and Wellness Information Center in the Main Library that is co-located with Social and Behavioral Sciences information services in the Main Library (Recommendation 2: Physical Space, Option #1).
1. Foundation

The foundation of future Health information services on the Urbana campus should be the Health Science and Wellness Information Center—an information service program that is focused on both core academic areas of curriculum and research as well as interdisciplinary areas of curriculum and research in AHS, LAS, ACES, Social Work, and the allied/affiliated programs on campus, such as Campus Recreation, the campus Health and Wellness program, and McKinley Health Center. Librarians representing the subject areas that provide health and wellness information services work together to re-shape the existing service profile to integrate more fully the disciplines involved. This may include AHS, Biology, Veterinary Medicine, Biotechnology, Food and Nutrition within ACES, Medicine, Communication, Psychology, Sociology, Social Work, etc. *The Library redefines the positions of librarians in related areas so that a percentage of each position is devoted to the ongoing provision of services in the Health Science and Wellness Information Center.*

The Health Science and Wellness Information Center has a formal and reciprocal collaboration with the UIC Library of the Health Sciences on the Urbana campus, leveraging the relationship between medicine, health, and wellness programs of study and areas of overlapping research and services. *To facilitate collaboration librarians in both libraries should have joint UIC/UIUC faculty appointments and work actively together to shape programs and services to faculty, staff and students at Illinois, regardless of campus affiliation.* Access issues to content that is licensed by each campus (but not by both) need to be sorted out—they may be complex, but the Team does not think this would be insurmountable, and it is well worth the effort in support of a more cohesive research and educational program in health, medicine and wellness university-wide. It is necessary for the libraries to move in this direction in order for the university to develop a competitive research and educational presence among its peer institutions in these areas.

*The Health Science and Wellness Information Center has the potential for integration as a designated space and a focused collection within a larger library setting, sharing a service point, collection, and seating space with the larger unit of which it is a part.* Because the Center serves a growing user population with well-defined needs, the Health Science and Wellness Information Center has a visible program presence in the space it occupies. Librarians and staff with expertise in allied areas are available for user consultation for more hours per week than the current AHS Library is able to be open. UIUC and UIC librarians in the areas of medicine, health, and wellness share joint appointments on both campuses and form teams in the provision of services to user groups.

The north addition to Huff Hall, expected to be finished in Spring 2011, will house several interdisciplinary programs related to AHS, including the Center for Health, Aging, and Disability and Masters of Public Health offices. *There will be the need for the part-time presence of a HSW librarian to better serve the university community and strategically address various programs related to AHS regarding health science and wellness information services.*
2. Physical Location

Recommendations on location of the Health Science and Wellness Information Center need to take into account constraints posed by available library spaces and the Library New Service Models goal of consolidating service points. Three possibilities considered by the team include the following:

#1: Health Science and Wellness is a part of a newly-configured Social and Behavioral Sciences Library in the Main Library.
Component areas of the Social and Behavioral Sciences Library might include the current topic areas covered by AHS plus Anthropology, Health Communication, Gender studies, Political science, Psychology, Social Work, and Sociology. The Library Executive Committee intends to charge a Social and Behavioral Science Planning Team in spring 2010 to "review Library service to the social and behavioral sciences and to identify opportunities to enhance support for these fields and for allied, applied fields of study". This could be a window of opportunity to explore possible realignments that include health and wellness, as a full partner, while the emerging configuration is still fluid.

There are several possible physical space arrangements that might accommodate the configuration outlined above, which an implementation team will need to take up. This newly-configured library might potentially be located in the current ESSL space. The Business & Economics Library (BEL) either becomes an area of focus within the Social and Behavioral Sciences Library or continues to evolve into a virtual library. In the current BEL space across the hall, the Library might explore the potential to establish the Education services and collections, including the renowned children’s and curriculum collections, perhaps combined with other closely related areas, including Library and Information Science.

#2: The Health Science and Wellness Information Center becomes a component of a Life Sciences hub in the ACES Library.
As plans proceed to transform the current ACES Library into a hub for Life Sciences information services, concurrent planning focuses on establishing the Health Science and Wellness Information Center in that facility. This would capitalize on the ties with basic life sciences information services, and also factors in a stronger relationship with the UIC Library of the Health Sciences. Given the current emphasis of curricula in AHS and the AHS Library collection, there was not much support for this scenario among the members of the team. As the discussions ensued, it became clear that the group’s perspective was coalescing around the idea of integrating the Health Science and Wellness Information Center into a broader Social and Behavioral Sciences Library, thereby providing a complementary service point to the UIC Library of the Health Sciences with its focus on clinical medicine.

#3: The Health Science and Wellness Information Center replaces the current location of the AHS Library.
This option would require the AHS Library to scale back on some of its services, and embrace a broader sense of mission, including stronger ties to the UIC Library of the Health Sciences, Division of Nutritional Sciences, and enhanced relationships with the ESSL. This scenario was
also proposed as being part of the transition to scenario #1 above; stated differently, in the short term reconfigure the AHS Library to be the new HSWIC, and eventually, create space for the HSWIC in a re-configured ESSL. This scenario raises a number of issues, given the current environment of limited fiscal resources. Could librarians from other units dedicate consistent percentages of their public service time to staffing a stand-alone HSWIC in the current AHS Library space in addition to their commitments in other physical spaces, particularly their "home" libraries? What resources would need to be invested to convert the current AHS Library to HSWIC space in the short term, and what additional investment will then be needed to integrate HSWIC with an expanded ESSL? If the AHS space does not visibly change, will it be evident that a broader mission and enhanced services are being implemented? Nevertheless, to ensure progress toward implementation of the HSWIC concept, the current location of the AHS Library can be a basis for service expansion as resources allow while plans for consolidating service locations for social and behavioral sciences within the Main Library are further developed and refined.

In making the recommendation to proceed with Scenario #1—the HSWIC becoming integrated into a Social and Behavioral Science library-- the team understands that this is a starting point, and that a future implementation team will work through many details and issues related to collections, services, staffing, and timeline for implementation. The recommendation requires that the Library physically re-configure several units, their collections, and the staff within Main Library space. It will also require that both staff and librarians in the areas of Social and Behavioral Sciences negotiate how they can maintain organizational/divisional working relationships and communication channels with colleagues in the life sciences and other areas. The timing is fortuitous, however, as a planning team is slated to be charged in spring 2010 to "review Library service to the social and behavioral sciences and to identify opportunities to enhance support for these fields and for allied, applied fields of study."

3. Name

This document is using “Health Science and Wellness Information Center” (HSWIC) as a working title. Stakeholders should have an opportunity to advise on the most appropriate name to communicate the Library’s expanded emphasis on health information services. As to the name and the focus of this center, the group discussed at least two names – Health and Wellness (some felt this lacked the needed emphasis on research); and Health Science and Wellness (most felt that this name embraced the necessary focus on research and instruction and public engagement. The team believes the name “Health Science and Wellness” articulates the perspective of wellness being central to both established and emerging programs of study. Similarly, the idea of co-locating this center with other Social and Behavioral Science libraries in a common physical space provides an effective complement to the UIC Library of the Health Sciences’ emphasis on clinical medicine and basic science.

4. Health Information Portal

The existing Health Information Portal (http://www.library.illinois.edu/health/) provides a strong starting point for further development of virtual collections and services. It is a tangible example of productive collaboration among multiple librarians with an interest in various aspects of
health sciences. Possible enhancements include implementation of “views” that are matched to the needs of various groups, such as undergraduate students. The topics encompassed by this portal are a strong reminder of the multi-faceted nature of “health information”, but further expansion to include topics like recreation and leisure, and disability is needed:

### Topics

**Column One**
- Aging
- Alternative Medicine
- Anatomy
- Audiology
- Bioengineering
- Dentistry
- Disability
- Environmental Health
- Epidemiology
- Genetics
- Health Policy
- Health Promotion and Education

**Column Two**
- Immunology
- Kinesiology
- Medical Imaging
- Medicine
- Microbiology
- Neuroscience
- Nursing
- Nutrition
- Occupational Therapy
- Oncology
- Pharmacology

**Column Three**
- Physiology
- Psychiatry and Psychology
- Public Health
- Recreation and Leisure
- Rehabilitation
- Social Work
- Speech-Language Pathology
- Sports Medicine
- Substance Abuse
- Toxicology
- Veterinary Medicine

### Goals for the HSWIC

The following four goals are provided as part of the mission of the new Health Science and Wellness Information Center. In addition to the goals, strategies are identified under each goal to guide the activities of the HSWIC. In the cases of both goals and strategies, the AHS Library and many other library units are already undertaking several of them. The goals and strategies are listed here to provide a comprehensive picture of the mission and expected activities of the HSWIC.

**Goal 1. Strengthen the ability to provide content in all formats and enhance access to health information**

- Expand digital resources
- Enhance online access
- Design web interface for multiple users and multiple purposes
- Maintain capacity to accredit academic programs
- Provide and adapt assistive technologies
- Enhance collaborations with other institutional and community-based libraries

**Goal 2. Strengthen health information services to meet the changing library needs of faculty and students**
• Enhance delivery of the American Sign Language curriculum
• Develop services to accommodate interdisciplinary programs related to health (e.g., new MPH and i-Health)
• Facilitate outreach capacity in civic commitment, community-based learning, and lifelong learning related to health (e.g., Health & Wellness Initiative, Center for Health, Aging, and Disability, and the Osher Lifelong Learning Institute)
• Provide laboratory resource rooms for instruction
• Increase collaboration with UIC’s Library of Health Sciences (LHS)
• Maintain and develop library staff expertise in health information for instructional purposes

Goal 3. Build a stronger and more diverse research capacity for health information

• Allow for data storage and manipulation
• Enhance access to clinical resources
• Assist in preparation for grants and contracts
• Expand capacity to aid in meeting IRB and IACUC requirements
• Sustain professional development of library staff in health information, including specialists in health information services related grants and external partners

Goal 4. Provide a common place for faculty, students, and staff focused on a culture of learning about health information

• Represent the College of Applied Health Sciences (AHS)
• Provide a sense of place reinvented for the 21st century that includes recognition of traditions of AHS
• Offer small group meeting areas connected to health information services
• Reflect a state-of-the-art library for health information, including display of health sciences information artifacts, art, archival material, books, and other media
• Build strength through advancement networks and “friends” of the library related to health and wellness

Appendix A. Health Information Services Planning Team Charge

There is a critical mass of researchers at Illinois who are developing programs ranging from health care policy to the biological determinants of diseases. They need comprehensive, timely, and reliable information to incorporate into their solutions. This information must be gleaned from diverse disciplines, including biology, social and behavioral sciences, technology and computer science, informatics, education, nutrition, health economics, health policy as well as allied disciplines such as veterinary medicine. In early 2009 librarians in Applied Health Sciences, Life Sciences, and Social Sciences library service programs identified the need for the Library to provide a more comprehensive approach to providing health information services to scholars across multiple disciplines on campus. Although the Library's Health information portal is a growing nexus for vital information, scholars and practitioners who work with
increasingly disparate information resources need different kinds of information support than they did 20, 10, or even 5 years ago. The Health Information Services Planning Team is charged with planning for the future of health-related library services to faculty, students, and practitioners. The Health Information Services Planning team is charged to do the following:

1. Articulate needs and strengths: Identify those areas of study on the Urbana campus that depend on health information services. Articulate the needs and strengths of both core and emerging areas of study, including free-standing and interdisciplinary programs in "theme" areas such as health management of chronic diseases and disabilities, assessment of public health delivery systems, prevention programs, and health policy. Illinois currently sponsors several health-related initiatives, including the iHealth initiative, and the Family Resiliency Center, the Center for Health, Aging and Disability, the interdisciplinary Neuroscience PhD program, the new Master's of Public Health program, and various other initiatives in which a critical mass of faculty and staff are engaged.

2. Assess overlap and gaps: Assess the growing overlap and gaps in services that are complementary to health information that exists with library programs in the life, medical and social sciences, and identify the most promising ways in which the Library can build support for both core and emergent programs.

3. Involve relevant groups and individuals in the Team's conversations to develop a broad-based understanding of the existing and emerging needs of information users in these allied disciplines.

4. Identify exemplars and models: Identify how and where (related to other service areas in the University Library) to provide the most effective Library services and access to information resources to all disciplines and communities that focus on health-related research, learning, and practice in the Illinois campus and outreach communities. Make recommendations for the kinds of staffing, physical footprint, and service programs that would enable the University Library to achieve this vision.

5. Recommend a plan for ongoing assessment of the effectiveness of the new service profile.

6. Author a report outlining a proposed service profile for health information services to the University Librarian and Dean of Libraries by December 15, 2009.

Appendix B. The Strategic Planning Context

1. University of Illinois 2007 Strategic Plan Progress Report (p. 17) 

Goal III: Breakthrough Knowledge and Innovation

Identifies the following as one of three key campus initiatives:
The Integrated Science for Health Initiative will blend the life, physical, and social sciences, engineering and human nutrition to combat disease and provide innovative approaches to health and wellness.

2. 2008 Strategic Plan Progress Report (p. 44-45)  
http://strategicplan.illinois.edu/annualreport08/index.html
The Health and Wellness Initiative will unify diverse campus resources and will partner with the external community. It will bring the expertise in the social and behavioral sciences found in colleges such as Applied Health Sciences, Education, Social Work, and Liberal Arts and Sciences to bear on national public health priorities regarding vulnerable populations.

The Division of Biomedical Sciences provides a single portal for internal and external communications and the infrastructure required to translate Illinois’ basic strengths in science and engineering into innovative solutions for human health.

3. UIUC Library Strategic Plan (May 2006, p. 23)  
http://www.library.illinois.edu/export/lsd/.../library_strategic_plan_2006.pdf
Identifies Center for Health Information Support as one of five strategic initiatives. The overall goal would be to:
Organize the Library’s research capabilities, content, expertise, and services into the Center for Health Information Support, which will serve as the preeminent source of information for the diverse array of disciplines that revolve around health and health professions.

Because collections and expertise are distributed among several libraries (ACES, Applied Life Studies, Biology, Biotechnology, Chemistry, Education and Social Science, Engineering, and Veterinary Medicine), there is little cohesion in the presentation of content, expertise, or services. There is no unified place, either physical or virtual, to which users can go.
We will develop a unified virtual place that brings together information that supports basic, applied, and translational research activities on campus.

Specific goals  
1. Create a unified web presence for health and allied health information.  
[Health Information Portal: http://www.library.illinois.edu/health/]
2. Identify and acquire access to critical information resources
3. Build partnerships with Extension and other units

4. Strategic Goals of the College of Applied Health Sciences

1. Provide national leadership in all AHS disciplines
2. Strengthen education and academic excellence
   Strategies include:
   Develop undergraduate interdisciplinary degree in Health [http://ihealth.illinois.edu/]
   Implement Master of Public Health program [http://www.mph.illinois.edu/]
Develop online offerings—Master of Science in Recreation, Sport and Tourism [http://global.uillinois.edu/recreation-programs/master-of-science-in-recreation-sport-and-tourism/]

3. Increase and improve facilities
4. Increase student access
5. Lead interdisciplinary health, aging, and disability research, education, and outreach on campus

Strategies include:
Campus Health & Wellness Initiative [http://www.provost.illinois.edu/committees/health_initiative.html]
Center for Health, Aging and Disability [http://chad.illinois.edu/]

5. National Context for Development of New Academic Programs

The demand for professionals ready to work in applied health fields vastly exceeds the supply of current graduates, both in the state and across the nation (see Bureau of Labor Statistics at http://www.bls.gov/ for top 10 areas of most rapid employment growth, 7 of which are in health-related fields). Societal demographics will continue to contribute to this need as the population ages.

National and state demographic trends predict unprecedented increases in the number of older individuals and persons with disabilities for the foreseeable future. In addition, health-related difficulties associated with a range of societal trends and conditions, such as inactivity, obesity and diabetes, create increased professional opportunities in areas such as health behavior change, wellness promotion and disability prevention. One of the consequences of these demographic shifts is a substantial increase in the need for students trained in health-related sciences and for the advancement of the knowledge base underlying the delivery of those services.

The health needs of a diverse society are best served by individuals who possess interdisciplinary competence, who are prepared to study and apply knowledge across traditional fields of knowledge. The same holds for meeting the needs of a population whose health can be improved with carefully guided behavioral change.

Appendix C

CORE AND EMERGING HEALTH INFORMATION SERVICE AREAS

Compiled by William Stewart in collaboration with Susan Farner, Charissa Lansing, Steven Leigh, Synthia Sydnor, Kelley Anne Tappenden, and Kenneth Wilund

Accreditation of academic programs:
Each academic unit of the college has at least one program accredited by a professional organization, and includes clinical certification. Although the majority of accreditation standards are directed at the content of coursework, they also have criteria to evaluate library resources and services. Accreditation is significant for many reasons, including legitimizing a curriculum and
providing graduates with a necessary set of skills to begin a career in their chosen field.

**American Sign Language curriculum:** As ASL grows it is vital to have a resource room in which students could have access to visual dictionaries, practice with conversation using interactive software, access to recorded interviews with member of the Deaf community to learn about Deaf culture, and use of software packages to study the neurolinguistics of sign languages.

**Data storage and manipulation:**
Coping with large biomedical datasets requires innovation in health information service delivery. Storing genomic datasets, manipulating them for analysis, and collaborating with other institutions is an emerging area of health sciences. Partnering with ATLAS, informatics, and other units and institutions is an expectation due to the requirements of large health-based datasets.

**Digital resources:**
Most faculty and student use of library information resources is conducted online via web interfaces. Journal articles are downloaded electronically, and when requested books, digital version of books are used or hard copies are mailed to campus addresses. Use of digital information sources is expected to increase, including accessing information from other institutions.

**Enhanced access to clinical resources:**
Clinical trials play significant roles in health science teaching, research, and service missions. Improved access to clinical resources for health-related research and professional service is expected. Numerous AHS faculty currently rely on resources, materials, tests, and diagnostics for their work, reliance on sources such as the Cochrane Library is expected to increase and should be cultivated by the campus library.

**Grants and contracts preparation:**
Preparing external grants and contracts is a significant part of health science teaching, research, and service missions. Resources and information services are necessary to promote training grants for students. Agencies such as the NIH are favoring institutions that have social networking resources that connect students with the array of researchers in a given field. In addition, the library web portal needs to have information and services directed at grant resources partitioned by various health topics, including access to successful proposals approved by NIH, NSF, and other agencies that are part of the public domain, and also access to health-related patents, disclosures, and licenses.

**Increased collaboration with UIC’s Library of Health Sciences (LHS):**
Although UIUC faculty and students have access to LHS resources and journals, they need to physically be inside the LHS using an LHS computer to gain access to electronic resources. For other health-related information resources, faculty and students have access from their own desktops. There are needs to identify the gaps (e.g., joint licensing) in campus health-related information resources and services, and for the campus Library to work jointly with LHS to fill gaps and make the user experience as seamless as possible. In other words, users should perceive an integrated UIUC-UIC collection of resources and services.
Interdisciplinary programs related to health:
Health is being redefined from biomedical to a broader vision that includes the six dimensions of wellness: environmental, emotional, intellectual, physical, social, and spiritual well-being. Several new programs have been established on campus aligning with this broader definition of health.

- The campus Health and Wellness Initiative (HWI) is a campus-wide initiative to aggressively advance Illinois’ health and wellness research efforts. The goals are to bring together scholars from a wide-range of units with expertise in health research, to expand capacity and prominence of health and wellness research, and to position campus for the highest levels of success in securing external support for innovative scholarship in health and wellness.

- The Center for Health, Aging, and Disability (CHAD) is dedicated to improving the lives of individuals, families, and communities. CHAD supports interdisciplinary research, education and outreach that enhances health, wellness, and quality of life across the lifespan. CHAD is administratively located in AHS.

- The campus Wellness Center was established in 2007 to provide resources to the campus community to encourage healthy lifestyles.

- The Masters of Public Health (MPH) enrolled its first students in Fall, 2009. The focus of the MPH is chronic disease prevention and rural health. This program includes coursework from several departments in AHS and across campus.

- The undergraduate interdisciplinary program in Health (i-Health) encourages students to examine today's complex health issues from multiple perspectives within three concentrations: health and aging, health and diversity, and health and behavior change. This program includes coursework from several departments in AHS and across campus, and enrolled its first students in Fall, 2009.

IRB and IACUC requirements:
Institutional Review Boards and Institutional Animal Care and Use Committees are expected to become more sensitive to issues related to trust and security of health datasets. Information resources and services that facilitate training of human and animal subjects protocol, and provide assistance in meeting various kinds of IRB and IACUC criteria are emerging areas of need. The demand for tutorials and educational materials on research ethics for faculty, staff, and students is expected to increase given current pressures to integrate instruction and training on ethics into research programs.

Laboratory resource rooms:
Several SHS courses would benefit from a centralized effort for laboratories for use in interactive software for head and neck dissection; phonological, lexical, syntactic, grammatical analysis software packages; speech, language, and hearing assessment and intervention materials. Although there are labs for faculty research, there are currently not any student labs for this function with SHS. Assessment toolkits for schools are already an appreciated part of the AHS Library services, and these type of toolkits (in an expanded form of a lab) is an anticipated need.

Library as representative of AHS:
AHS units are spread across several buildings on campus, and these buildings do not have a strong identity as being part of AHS. For example, Huff Hall is known by most people as the gym where varsity volleyball, wrestling, and gymnastics perform. For AHS tours and other introductions of people to the college, the AHS Library is generally a starting point for such events. The current physical space of the AHS Library has served an important function that reflects the pioneering history of the college (e.g., birthplace of sport psychology, sport history, sport anthropology, exercise physiology) as well as the longstanding interdisciplinary breadth of the college regarding health, aging, and disability within one location.

Library as state-of-the-art location for health information:
A state-of-the-art health information library functions as a scholarly commons that brings together in one location access to health information, health information services, and library staff with expertise in health information resources. Exhibitions for the campus community that reflect health information are part of the state-of-the-art for health information services.

Library as sense of place:
AHS has a history of attracting students from under-represented groups, including people with disability, African-American, and Latino populations. Social networks, personalization of the university for undergraduate student experiences, and having a place to call one’s own has been an important part of the AHS strategy to recruit and retain students from all walks of life, including under-represented populations. For many students and AHS alumni, the AHS Library has served as a study location that provided a sense of place.

Library as small group meeting area:
Numerous classes in AHS require small group activities that include accessing resources, referencing material, and coordinating across disciplines. These small groups require a place to work, exchange ideas and discuss, with access to information sources, specialist expertise to facilitate access by undergraduate students.

Online access:
New forms of teaching, research, and service are being implemented that require accessing information online. The new online M.S. in the Department of Recreation, Sport, and Tourism established in Fall, 2008, currently has 100 students enrolled. There are several courses in this program that require health information, and would need services to access such information. The number of students, courses, and outreach opportunities related to health information services is expected to grow, and involvement of library staff with class instruction will expand.

Outreach and public engagement for health:
The 2007 Campus Strategic Plan calls for faculty who will transform the world, conquer the challenges of the 21st century, provide a campus environment that promotes health, justice, and prosperity locally and globally. To promote such global health, the health information services portal will need to partner with other libraries and external organizations related to poor and developing areas to lend support to local community approaches to improving health. The expansion of global digital health information access many be accomplished through various partnerships (e.g., Carnegie, World Health Organization, Gates Foundation).
Web interface designed for multiple users and multiple purposes:
There are many users and purposes for people of the campus community to access health sciences web pages. The portal needs to be constructed to allow users to sort themselves out and not overload them with choices. Particularly for undergraduate students who want basic information about health for class purposes, the health sciences web portal needs to be inviting and encourage them to access information. Other students may be sophisticated in their ability to select options from a health sciences web page, and may require advanced access to health related resources. The web portal should be able to handle a variety of student users in inviting and encouraging ways. Faculty and staff will be associated with an array of uses and purposes, and the web portal should be inviting, encouraging, and useful for them also. The Center for Health, Aging, and Disability is a significant player in the uses and users of interdisciplinary health information services.

CORE AND EMERGING HEALTH INFORMATION

Aging:
lifespan, public health, medicine, disability studies, mobility, assistive technology, independent living, healthy communities, retirement, cardiovascular conditioning

Biomechanics:
motor performance, human movement, ergonomics, neuromuscular system

Cancer survivorship:
psychology, medicine, employment, care-giving, chronic pain, diagnosis, therapy

Community development:
healthy communities, sustainable development, rural communities, agricultural tourism, community recreation and leisure, festivals and event management

Dietetics:
dietary bioactive components, biochemical and molecular nutrition, toxicology

Disability:
physical, cognitive, psychiatric disability, athletes with disability, adapted sports, learning disability, Paralympics, special Olympics, independent living, assistive technologies, urban design, voice activated technology, visual impairment, multiple sclerosis

Diversity:
multiculturalism, race, ethnicity, gender, social class, persons with disability, immigration, identity, white privilege, transnationalism, African-American culture, Latino culture, socio-demographics changes, under-served populations

Epidemiology:
medicine, veterinary medicine, public health, disease, illness, food environments, vulnerable populations, epigenetics of disease

Exercise physiology:
Cardiovascular health, metabolic disorders, gait and balance, lifestyle modifications, motor control, psycho-physiology, immunology

**Health:**
literacy, community health, public health, mental health, social well-being, wellness, college student health, health policy

**Health care:**
policy, administration, law, community health, organization, business

**Health disparities:**
feminism, critical theory, gendered behavior, leisure as resistance, power differentials, participatory action research, health disparities, social justice, empowerment, social responsibility, racial and gender inequalities, inter-racial contact

**Health technologies:**
Health informatics, medical records, healthcare information systems, biomedical datasets, prosthetic devices, assistive technology, rehabilitative support, rehabilitation engineering, assessment and intervention technology, biomedical engineering, health promotion monitoring systems, independent living design

**Hearing:**
audiology, hearing disorders, auditory processing, deafness, hearing loss, tinnitus, sensory prosthetic devices, rehabilitative audiology

**Hospitality:**
hotel management, reservation demand and forecasting, hotel revenue management, marketing

**Leisure behavior:**
Constraints, family leisure, play, intrinsic motivation, outdoor recreation, motherhood, child development, lifespan, deviant behavior, philosophy of leisure, chronic illness, aging, leisure of care-givers, quality of life

**Life-long learning:**
Learning across the lifespan, alternate university, non-traditional student, global campus, civic engagement, service-based learning

**Neuroscience:**
Neural substrates of speech, language, and hearing, neural plasticity, neuro-linguistics, cognitive functioning, auditory processing, speech and motor control, fMRI imaging, perceptual learning, cross modal processing, traumatic brain injury, psychoacoustics, tinnitus, vestibular balance, lexical and phonological development, hearing aids

**Nutrition:**
bone and body composition, metabolism, food safety, education, community nutrition, human and clinical nutrition, animal nutrition, consumer acceptance, professional aspects of nutritional practice

**Obesity:**
physical activity, nutrition, public health, medicine, media influence

**Park planning:**
Landscape change, open space, stakeholder involvement, federal lands, wilderness, natural resource management, ecological restoration, volunteerism, land management, trail development, environmental design, park districts

**Physical activity:**
kinesiology, public health, disparities, neighborhood design, urban planning, attitude and behavior, physical activity and the humanities/arts, physical activity disparities, livable communities, walking, trails,

**Physical education:**
pedagogy, child development, play, children’s wellness, obesity, teacher education programs, school environments

**Recreation:**
programming, community, citizen involvement, needs assessment, physical activity, youth, at-risk populations, physical activity, play, obesity, human resources and personnel management, virtual recreation

**Rehabilitation:**
Community health, persons with disability, temporary disability, assistive technology, personal assistant,

**Speech communication and language science:**
Communication disorders, cleft palate, craniofacial anomalies, head and neck oncology, genetic disorders, stuttering, dysphasia, illiteracy, second language learning, vocal abuse, impairment, developmental language delay, autism, aphasia, apraxia, specific language impairment

**Sport:**
Marketing, economics, finance, community, discrimination in sports, inequality in sport, corporate sports, sport labor economics, athletic administration, stakeholders in sport, legal aspects, intercollegiate sports, sports nutrition, sport geography, transnational sport

**Tourism:**
planning, mass media, sustainability, heritage protection, development, marketing, consumer culture, entertainment, destination management, travel behavior, neighborhood, state and national policy
Wellness:
stress reduction and management, sociology, community and global health, emotional and social well-being, mental health, nutritional aspects of wellness

Appendix D HISP Library Survey Responses

Summary of Responses to Survey of Library Units on Health Information Services

Results compiled 11/16/09 by Linda C. Smith

1. My unit regularly receives reference requests for health-related information in the following subject areas:

(AHS) All aspects of health and wellness, including health promotion, health administration/policy, global health, epidemiology, prevention of chronic diseases/conditions, public health, community health, HIV/AIDS, wellness and development over the lifespan, aging, disability, traumatic brain injury, childhood language development and associated disorders, communication disorders caused by stroke and other disabling conditions, aphasia, dysphasia, neuroscience of language and speech, cognition and language/speech, blindness, deafness, cochlear implants, hearing disorders, hearing aids, American Sign Language, stuttering, cerebral palsy, down syndrome, ADHD, spinal cord injury, multiple sclerosis, movement disorders, Parkinson’s disease, Alzheimer’s disease, rehabilitation counseling, disability and education/career opportunities, assistive technology, health statistics, health data, demography of health/aging, Latino/a health literacy, child health, nutrition, sports medicine, athletic training/conditioning, injuries, cardiovascular rehabilitation, human biomechanics, gait analysis, motor control and development, balance, body/bone composition, physical activity, exercise, fitness, obesity, motivation and exercise adherence, role of exercise (relative to menopause, aging, memory, learning, cognition), exercise immunology, exercise psychology, exercise neuroscience, kinesetrics, exercise psychophysiology, neurocognitive kinesiology, therapeutic recreation, healthy communities, leisure/park planning for health across lifespan, healthy lifestyle, all sports as exercise/for health benefit

From undergraduate students: above subjects in writing a term paper, finding peer-reviewed journal articles
From graduate students: above subjects in literature review, writing a thesis/dissertation, teaching a course
From faculty/staff: above subjects in research, teaching, writing grant proposals
From the general public: Yes, but to a lesser extent than from our primary UIUC academic clientele. Subjects are usually personal health issues, or those of loved ones.

Other libraries
(Commun) From undergraduates, graduate students, and faculty: health communication, drug advertising, birth control comm and advertising
(Reference) Most often from undergraduate students and the general public
From undergraduate students: Occasionally, 1-2 requests a month
From graduate students: Mainly CVM students
From faculty/staff: Some. Mostly CVM but some ACES (Animal Sci)
From the general public: 1-3 requests a month from veterinarians and the general public

From graduate students: medical librarianship, medical/health reference sources

Some of our patrons are studying for medicine, pharmacy, and other health-related careers. Other patrons may explore biochemistry or nuclear magnetic resonance related to human health, for example. Their reference requests reflect these interests.

From the general public: These inquiries do not seem to relate directly to health except for toxicity information.

From undergraduates, graduate students, and faculty/staff

My unit provides health-related instruction and instructional materials in the following modes of delivery. Indicate subject areas addressed by each and note modes of delivery where demand is growing:

One-on-one: all subject areas above are included in one-on-one instruction in the unit; also using online catalog, databases, library web site, Health Info Portal, other print and online sources; a great deal of one-on-one for undergraduate assignments
Group sessions organized by the library: I occasionally offer a specialized session on a topic, like interlibrary loan; I also have organized sessions on Refworks and Data sources for AHS students (utilizing expertise of other staff in the Library)
Course-integrated sessions: unit provides an average of 30 course-integrated sessions per academic year in kinesiology, community health, speech & hearing science
LibGuides: LibGuides aren’t accessible for people with disabilities, so I don’t use them. Instead, I offer subject guides (via Library CMS) on the unit web page. Topics: aging, audiology, epidemiology, health policy, health promotion/education, kinesiology, public health, recreation/sport/tourism, rehabilitation, speech-language pathology, sports medicine
Handouts: a variety of subject guides, lists of new books, database descriptions, Refworks, etc.
Other approaches: Health Information Portal
One-on-one: A great deal of one-on-one for undergraduate assignments.

Other libraries:
(Undergrad) Overview of library resources for McKinley staff; We have a variety of LibGuides on health topics, as fall under various controversial topics assignments. We also maintain the H1N1 LibGuide.
One-on-one, group sessions organized by the library, course-integrated sessions, LibGuides, handouts: All handouts have been moved to webpages

we may create a LibGuide in the future for musicians' health and related topics in the future.

One-on-one: Reference assistance in health comm, advertising of drugs, birth control, especially condom use and advertising

I frequently give sessions to grad student classes or lab groups where the topic is "how to use RefWorks", but in reality I use this as a ploy to also teach them a bit about how to search PubMed effectively, and how to set up alerts from PubMed. These are usually Food Science department affiliates, but have also been neuroscience researchers in Entomology, or sociology grad students who are working on public health issues!

We provide one-on-one and group instructional sessions on SciFinder Web and Web of Science (Science Citation Index Expanded), multidisciplinary databases that include information on health-related subjects mentioned previously (e.g., biochemistry, organic chemistry)

One-on-one: General - usually course-related - delivery could be by phone, chat, e-mail or in person - note: we don't give out health related information - we only let people know how to find the info they need - whether it is through journal articles, books, libguides, etc. LibGuides: URL's may be sent to patrons via e-mail or chat

My unit provides other services to respond to health information needs on campus. Specific examples include:

(VM) Animal health-related library displays, web pages, links to relevant resources in veterinary medicine

(Reference) Referrals to McKinley or Health Sciences Library for information,

Does your unit anticipate changes in the level of interest in health-related information due to the following (provide specific examples):

Trends in research – growing need/demand for health research, grant seeking in health; obesity, aging, neuroscience
2. Developments in degree programs – new MPH, iHealth programs
3. Outreach initiatives – could expand with appropriate staffing

(VM)
1. Trends in research - Yes - translational medicine initiatives; one medicine/one health programs
2. Developments in degree programs - Dual DVM/MPH degree programs
3. Outreach initiatives - Yes - there's a new Chicago Center for Veterinary Medicine which is an extension of the CVM-Urbana

(Business) Trends in research --translational research, discovery in life sciences as related to health

(Education & Social Science) Developments in degree programs: as additional degree programs are developed, a health component is often relevant. For example, the new bachelor's degree in social work is likely to have a health aspect.

(Comm) If the Communications Library incorporates the Speech Comm Collection from ESSL, we would collect and house more materials in this area since there are faculty in the Comm Dept (LAS) who do health comm research.

5. My unit faces the following challenges in responding to requests for health-related information:

(AHS) Undergraduate students usually need instruction on how to use the online catalog and article databases in general, in order to find health-related information.
not enough staff to serve the growing number of students interested in health information; need more librarians for specialized instruction and course-integrated instruction

(VM) Access to clinical medical resources. Particularly MDConsult. We do not have enough simultaneous user accesses, nor do we have access to the complete version of MDConsult. While it's not the critical tool for UIUC that is is for UIC, many new resources would be open to our users if it were made available to the Urbana campus.

(LIS) Students studying medical librarianship occasionally seek access to online resources (such as commercial web-based information tools aimed at practicing physicians or nurses) to which the University Library doesn't subscribe.

(Business) not having databases that have good pipelines for the discovery process, such as Life Science Analytics, Emerging Medical Technology, Health Devices International Sourcebase, and Medical e-Track.

(Reference) New GA's often don't realize that books and journals related to medicine at Urbana Health Sciences are only found through UIC catalog.

6. Are you aware of potential audiences for health information resources and services provided by the library that are currently not being reached?

(AHS) The local community; Students who are not finding the information they need, but don't know where to go.
(LIS) Possibly we could be doing more to share information/resources with public libraries that in turn provide health information to local residents. The LIS Library has always been a passive provider of services and content to support the professional development of local librarians, but we have not targeted them or their patrons as an audience for outreach.

(Business) Scientists learning how to run businesses, technology transfer, and chemists who are doing discovery work. Even kinesiologists are looking at trends in product development for therapy. We do quite a bit on sports promotion too.

(Undergrad) Outreach to McKinley Health Center, dorms, counseling center, Campus Recreation, community.

Appendix E. Information Literacy Considerations
Compiled by Mary Beth Allen

- What are the existing information literacy programs provided? Should they continue? Cease? Expand in their present mode? Continue but be transformed? Existing information literacy programs should definitely be continued, and there are many opportunities to expand in this direction. There is a desire to increase the health information literacy on campus and beyond. There is a desire to increase the number of course-integrated and stand alone sessions on aspects of health information.

- What opportunities exist for new information literacy programs? What opportunities can be created through strategic efforts? As above, many opportunities exist, and strategic effort to increase visibility and offer more sessions is only limited by the resources available.

- How is the curriculum served structured? Changing? Are there key places in the curriculum to target for instruction? With the development of new programs in the College of Applied Health Sciences, there will be increased opportunities to integrate information literacy into the curriculum at both undergraduate and graduate levels.

- Are librarians involved with discussions of student learning in the departments/colleges/units served and influencing adoption of information literacy learning outcomes? If not, how could this be brought about? The AHS Librarian works with the college of AHS academic advisors in each department to reach out to new students in the college. Several faculty members in higher level courses invite information literacy into their classrooms and labs. The AHS Librarian is in touch with Kim Graber about the role of the AHS Teaching Academy and how the library can integrate into that effort.
• Are librarians involved with discussions of teaching innovation and development in the departments/colleges/units served and influencing creation of assignments that further information literacy learning outcomes? If not, how could this be brought about? Yes, this happens with the academic advisors and faculty and teaching assistants. There is certainly opportunity for further discussion.

• What accreditation guidelines influence the curriculum and opportunities for library instruction integration? There are several accredited programs in AHS, offering opportunities to integrate into those curriculums.

• Are online instruction methods effectively used to complement in-person information literacy efforts? We are beginning to explore online instruction methods, first with the Health Information Portal, with PowerPoint slides about the Library, and continuing with online tutorials developed in cooperation with the UIC Library of the Health Sciences-Urbana. We’re also exploring live online instruction with UIC LHS-U using “e-rooms” which is similar to Elluminate.

• What assessment efforts demonstrate the effectiveness of library instruction and how can assessment of student learning be improved? Assessment has only been informal. This is an area we can explore further. When developing the Health Information Portal, accessibility and usability testing was a major factor in the design process.

• What resources (professional development, facilities, technology, etc.) are needed to achieve the vision for information literacy in this area? Resources are needed to provide technical assistance and expertise with new software like e-rooms, Camtasia for tutorials, and web-development and social networking techniques.

• Who are/could be partners (internal to Library and external) in these efforts? UIC Library of the Health Sciences, Main Reference, Undergrad Library, Life Science librarians, Social Science librarians, GSLIS faculty and grad students, and AHS faculty and students are all potential partners.

• What scope of information literacy efforts is envisioned for the resulting new unit or model of services? We see a significant scope of effort in information literacy because health information is specialized and a large amount of health information is available online, both academic literature and consumer health information.

Appendix F: Comparative Data Profile of Current Health Information Needs and Services
Compiled by Mary Beth Allen from various data sources, including DMI data, College of AHS data, and University Library statistical reports.

A wide range of existing data was consulted by the Health Information Services Planning team, including that available from campus DMI and from the Library. The NSM website provides a link to strategic profile graphs, based on campus DMI data. The strategic profile graph allows for comparison with any campus unit.

The strategic profile for the College of Applied Health Sciences clearly indicates a steady pattern of growth in student enrollment over past years, from 1053 undergraduate and 214 graduate students in 1999-00, to 1807 undergraduate and 302 graduate students in 2008-09. The College expects enrollment growth to continue in the future, especially in response to the new iHealth and MPH degree programs. Likewise, AHS has seen a large increase in the number of undergraduate degrees awarded, from 322 in 1999-00 to 585 in 2007-08. Faculty numbers also increased, from 46 FTE in 1999-00 to 63 FTE in 2008-09. This growth is significant in itself, but even more remarkable when compared with many other campus programs. The overall pattern of growth in the College of Applied Health Sciences is an indicator of significant need and demand for library collections and services.

Not surprisingly, usage statistics for the Applied Health Sciences Library indicate that the physical space, the collection, and services continue to be used heavily. A number of usage counts are collected routinely by the University Library, including gate count. Of the 40 library units reporting gate count, the AHS Library was ranked 14th highest in fy05, 14th in fy06, 15th in fy07, 14th in fy08, and 14th highest in fy09. The AHS Library’s gate count remained steadily ranked at approximately 14th highest among all 40 units (higher than 26 other units). The high gate count is an indicator that the AHS Library is a vital part of the academic activity pattern of students seeking a place for individual and collaborative work.

Of the 40 library units reporting the number of reference questions answered in the unit, the AHS Library was ranked 12th highest in fy06, 14th in fy07, 11th in fy08, and 12th highest in fy09. Although overall number of reference questions received in person at the University Libraries declined during this period, the AHS Library’s number remained steadily ranked at approximately 12th highest among all 40 units (higher than 28 other units). This consistently high rank in reference questions answered indicates that students and faculty continue to rely on library services and assistance from AHS library staff as a source of expertise.

Circulation statistics by happening location, no reserves, indicate overall circulation activity in the unit, including charge and discharge of items from other units’ permanent holdings. The AHS Library was ranked 11th highest of over 40 library units reporting, with 7,506 total circulation transactions for 2007-08 and 7603 circulation transactions in 2008-09. This is a high level of circulation activity, compared with other library units.

Circulation statistics by permanent location, no reserves, indicate use of the library unit’s own collection. The AHS Library was ranked 12th highest of over 40 library units reporting, with 10,048 in 2007-08, and 13th highest with 8,967 in 2008-09. This indicates that the AHS Library’s permanent collection is highly relevant and in current use.
Looking at library public printer usage as a measure of activity in the unit, the AHS Library’s printer was ranked as the 11th highest in 2008-09. This is somewhat misleading because several units (Grainger, ACES, Undergrad) have more than one printer. However, among library units with only one public printer, the AHS Library ranked 4th highest in use of its printer. Students continue to use the AHS Library for their academic work, and use of the unit’s public printer is an indicator of this high level of usage.

The Library routinely tracks information literacy instruction provided by library unit. The AHS Library provides a consistent number of course-integrated information literacy sessions each year, requested by faculty and instructors. Approximately 25-30 sessions are provided each academic year for both undergraduate and graduate level students across a range of courses. Health-related literature has its own specialized search tools, and there is increasing demand for relevant library instruction that utilizes these sources.* Demand is expected to continue in the future, with increased enrollment in new degree programs such as iHealth and the Masters in Public Health.

The University Library has administered several large scale surveys of its user base in recent years, but the team concluded that results might not be especially useful because of low numbers or low percentage of participation. One notable finding came from the University Library’s survey of undergraduate students in 2005, in answer to the question, “Which University Libraries do you use on a regular basis?” 4474 undergrads answered the question. The Applied Health Sciences Library was ranked 6th behind only the Undergrad Library, Grainger, ACES, Main Stacks, and Education & Social Science. Plans for providing a center for health information in the University Library must take into account that there will be an increasing number of people in need of diverse library services and resources that support health information and health information literacy.

*Not only is the health literature specialized, but this type of librarianship is also specialized, as evidenced by the existence of an entire library association devoted to it (the Medical Library Association). The Association of College and Research Libraries recently established a new "ACRL Health Science Interest Group," for librarians in non-medical college and research libraries.

Appendix G: Health Information Services Planning Grid

<table>
<thead>
<tr>
<th>Service</th>
<th>Existing in AHS Library</th>
<th>Existing in Library</th>
<th>New AHS Library</th>
<th>New Other Library</th>
<th>New Partnership extra-Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection development and selection for AHS &amp; related subjs.</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-circulating, browsable print serials available in AHS Library</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circulating books from AHS Library</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walk-up reference service</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>Existing AHS</td>
<td>Existing in Library</td>
<td>New AHS Library</td>
<td>New other library</td>
<td>New partnership extra-library</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>---------------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Classroom Instruction sessions</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health info. Portal updates</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(personalize Lib. Gateway too)</em></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutorials/libguides</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collection processing/maintenance</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accreditation &amp; Library</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Sign Language resource room</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data storage &amp; manipulation</td>
<td>✓</td>
<td></td>
<td>IDEALS, Scholarly Commons</td>
<td></td>
<td>GSLIS, NCSA, CITES, ATLAS</td>
</tr>
<tr>
<td>Digital resources &amp; online access</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhanced access to clinical resrcs.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(Med. Textbks &amp; more ejnls).</em></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant/research information</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>OVCR</td>
</tr>
<tr>
<td>eScience eScholarship</td>
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<td></td>
<td></td>
<td></td>
<td>ScholarlyCommons, L.if Sci. Data Lib,n.</td>
</tr>
<tr>
<td>Interdisciplinary needs of iHealth, MPH</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRB-training, support, HSR &amp; AS compliance</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>OVCR</td>
</tr>
<tr>
<td>Lab resource rooms</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library AHS focal point; small groups; “sense of own place”</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Existing AHS**: existing service provided by the AHS library.

**Existing in Library**: existing service supported outside of the AHS library, but in a Library unit.

**New AHS Library**: a new service, specific to AHS clientele, that would be desirable to clientele of the AHS library.

**New other library**: a new service that might be offered by the Library and would likely be of interest to Library users across a number of units;

**New partnership extra-library**: a new service, program, or space allocation that includes a partnership with one or more campus units outside the Library;

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**Appendix H. Organization of Health Information Services on Other University Campuses**
Interesting findings:
Many comprehensive universities that do not have a medical school DO offer an accredited MPH program.

Libraries are often organized/structured according to the way the academic colleges, schools, departments are organized/structured.

1) Indiana University

May 5, 2009 BLOOMINGTON, Ind. – “In response to long-standing public health needs in Indiana, Indiana University President Michael A. McRobbie today announced a plan that calls for the formation of two schools of public health, one at IU Bloomington and the other at Indiana University-Purdue University Indianapolis.
It is expected that the new school at IU Bloomington will be based on the School of Health, Physical Education and Recreation, the third-largest school on campus, and will focus more on rural health issues, general wellness and other areas that build on the existing strengths of HPER. The school at IUPUI will grow from the Department of Public Health in the School of Medicine and is expected to focus more on urban health issues. “

Health, Physical Education and Recreation Library (HPER): serves School of HPER
http://www.hper.indiana.edu/

School of HPER includes departments of:
Kinesiology – with programs in athletic training, contemporary dance, exercise science, fitness specialist, sport communication, and sport marketing and management, physical education teaching
Recreation, Park, and Tourism Studies - offers specializations in Park and Recreation Management, Recreational Sport Management, Therapeutic Recreation, Tourism Management, and Outdoor Recreation and Resource Management
Recreational Sports – facilities (pools, gyms, etc.), sport/rec programs, intramurals, etc.
The Dept of Speech & Hearing Science is in the School of Arts and Sciences, and is served by the Wells Library (main humanities & social sciences)

2) University of California – Berkeley

The university is organized into 8 colleges or schools. They have a School of Public Health that offers 5 different graduate degree options across 12 areas of concentration (biostatistics, epidemiology, health policy & management, etc). Their college of Natural Resources includes agriculture, environmental science, plant & microbial biology, and nutritional science & toxicology. Their College of Letters & Science includes arts, humanities, physical sciences, biological sciences, and social sciences.
Library consists of Doe Library, the Bancroft Library, Moffitt Library, and more than 20 subject specialty libraries serving a variety of academic disciplines. Bancroft has rare books & manuscripts. Doe contains most of humanities and social sciences. Moffitt is the “teaching library” and contains a core collection designed as an entry point for undergrads and new students; also contains computing facility.

Separate science libraries at Berkely include:
Public Health (Shelden Margen Public Health Library) http://www.lib.berkeley.edu/PUBL/
Others: Bioscience and Natural Resources Library, Chemistry and Chemical Engineering Library, Earth Sciences and Map, Engineering, Mathematics and Statistics, Optometry and Health Sciences, Physics Astronomy, Education - Psychology

3) Cornell University Libraries:
Flower-Sprecher Veterinary Library
Edna McConnell Clark Physical Sciences Library
Nestle Hotel Admin/Hospitality Library
Uris Library (humanities and social sciences)
Mann Library (agriculture, life sciences, human ecology, applied social sciences: biology and biotechnology, plant and animal sciences, nutrition, food science, natural resources and environmental sciences, textiles, human development, business, policy analysis, and other selected natural and social sciences) “Mann Library supports the instruction, research, and extension programs of Cornell University's College of Agriculture and Life Sciences and College of Human Ecology.”
Olin Library (social sciences and the humanities): philosophy, religion, classics, government, political science, history, economics, history of science, linguistics, literature
+ many other libraries
- No programs in SPSHS or Kinesiology or Recreation/Sport
Medical Library in NYC

4) Northwestern University
Dept of Communication Sciences and Disorders is in School of Communication / PhD programs in audiology, hearing science, speech-language pathology, neuroscience, cognitive science (but School of Communications includes cinema, theatre, dance)

Galter Health Sciences Lib serves NW medical school, MPH program, physical therapy program

5) University of Iowa
Hardin Library for the Health Sciences: serves Biosciences, Communication Sciences & Disorders, Dentistry, Medicine, Nursing, Pharmacy, Public Health, Exercise Science/Health & Sports Studies
UI also has Main Library, Biological Sciences Library, Psychology Library and several other subject libraries

6) Purdue University
Pharmacy, Nursing, and Health Sciences Library serves the College of Pharmacy, Nursing, and Health Sciences (health sciences here includes health physics, medical physics, toxicology, occupational and environmental health sciences, and radiation biology)
Life Sciences Library serves Agriculture, Biology, Animal Science, Food Science, Nutrition
Separate Veterinary Medicine Library
Humanities, Social Science, and Education Library (HSSE) serves Health & Kinesiology,
Psychology, Speech Language & Hearing Sciences, African American Literature, Comparative
Literature, Asian, Art, Anthropology, Film, foreign language education, Political Science,
Philosophy, Religion, Rhetoric & Composition, Women’s Studies

Department of Health and Kinesiology and Department of Speech, Language and Hearing
Sciences are in College of Liberal Arts

7) University of Colorado
UC Boulder: Science Library is located on the second floor of the Norlin Building (Main
Library). It houses extensive science research resources and provides services to the students,
faculty and community in the areas of general science, the history of science, and the life
sciences. The Science Library specifically serves: biochemistry, chemistry, ecology and
evolutionary biology, kinesiology, molecular, cellular and developmental biology, museum,
psychology, speech, language & hearing sciences

Other floors of the Norlin Building serve art and architecture, government publications,
humanities, social sciences. They also have a commons area in Norlin.

Libraries outside the Norlin Building include: Business, Earth Sciences, Engineering, Map,
Math/Physics, Music.

UC Denver has the medical school and library

8) Pennsylvania State University Library- University Park
--Pattee Library serves Arts & Humanities (including Music), Gateway/learning commons,
News/Microforms
--Paterno Library serves Business, Education & Behavioral Sciences, Life Sciences, Maps,
Social Sciences, Special Collections

… Within Paterno Library, the Education & Behavioral Sciences floor includes
communication sciences & disorders, rehabilitation, psychology, human development & family
studies, education

… Within Paterno Library, the Life Sciences floor includes agriculture sciences,
biological sciences, health sciences (kinesiology, health, medicine, nursing, nutrition,
biobehavioral health)

Penn State has separate libraries for Architecture & Landscape Architecture; Earth & Mineral
Sciences; Engineering; Physical & Mathematical Sciences; Law

Penn State has a College of Health and Human Development with the following departments:
Biobehavioral Health; Communication Sciences and Disorders; Health Policy and
Administration; Hospitality Management; Human Development & Family Studies; Kinesiology;
Nutritional Sciences; Recreation, Park, and Tourism Management
Penn State’s medical school is in Hershey

9) Texas A & M Libraries:
Medical Sciences Library: serves colleges of Agriculture and Life Sciences, Medicine, Nursing, Veterinary Medicine and Biomedical Sciences, and the School of Rural Public Health
Cushing Library: rare books
Evans Library: serves basic sciences, engineering, humanities, and social sciences, documents, maps, and College of Education & Human Development including Department of Health & Kinesiology, Educational Psychology, Recreation, Parks & Tourism

10) University of Maryland-College Park
White Memorial Chemistry Library serves the School of Public Health; College of Chemical and Life Sciences; Dept of Cell Biology & Molecular Genetics; Dept of Chemistry and Biochemistry
School of Public Health includes these departments: Epidemiology and Biostatistics; Health Services Administration; Kinesiology; Maryland Institute for Applied Environmental Health; Public and Community Health; Outreach (to OLLI, etc). They offer an accredited MPH program.
Dept of Hearing and Speech Sciences is covered via the McKeldin Library (Main).

11) University of Texas – Austin
College of Education includes Dept of Kinesiology and Health Education
Life Science Library: covers Biology, Medicine, Nutrition, Pharmacy, Agriculture, Biology, Microbiology, Neuroscience, Botany, Ecology, Environmental Studies, Kinesiology and Health Education, Sports and Recreation, Medicine, Consumer Health, Alternative Medicine, Pharmacy, Zoology
Perry-Castañeda Library (Main) covers Communication Sciences and Disorders

12) North Carolina State University
New Hunt Library under construction on main quad – to be completed in 2012 (will provide seating for 4 times as many students as Library does now).
D. H. Hill Library, Design Library, Textiles Library, Veterinary Medicine Library
Natural Resources Library: research and instructional support for the College of Natural Resources and the Department of Marine, Earth and Atmospheric Sciences at NC State. The library collection supports research and teaching in forestry, natural resources, sport management, parks and recreation, tourism, paper science and engineering, wood products, biomaterials and bioenergy, and marine, earth, and atmospheric sciences.

No health focus.

13) SUNY Albany
School of Public Health - Accredited by the Council on Education for Public Health, the School is organized into four academic departments, offering M.S., M.P.H, Dr.PH and Ph.D. degrees: Biomedical Sciences; Environmental Health Sciences; Epidemiology and Biostatistics; and Health Policy, Management and Behavior
SUNY doesn’t appear to have programs in Speech & Hearing Science, Kinesiology, Recreation, Sport, Tourism

Dewey Graduate Library: Gerontology, Social Welfare, Information Studies, Law, Public Administration, Public Policy, Political Science

14) Colorado State University
The College of Applied Human Sciences includes 8 departments and 3 interdisciplinary programs: Department of Health and Exercise Science, Food Science & Human Nutrition, Human Development and Family Studies, Occupational Therapy, School of Education, School of Social Work, Construction Management, School of Teacher Education & Principal Preparation, Design and Merchandising, Interdepartmental major in Family and Consumer Sciences, Food Science/Safety Interdisciplinary program, Gerontology Interdisciplinary program.
All campus is served by Morgan Library. The Veterinary Medicine Library is the only branch library.