Supplement to Official Program

MLA '05 Abstracts

May 14–19, 2005 • San Antonio, TX

Contents

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Section Programming 1

Clinical

Chiropractic Libraries, History of the Health Sciences, and Nursing and Allied Health Resources Sections and Complementary and Alternative Medicine SIG

Medical Diversity: Thinking Outside of the Box

Monday, May 16, 2:30 p.m.–4:00 p.m.

Bridging Borders: *Curanderismo*, Latino Folk Medicine in the Hospital

Barbara R. Campbell, health sciences librarian, Reference, Library, University of Texas–El Paso

Purpose: Bridge the gaps between shamanism, witchcraft, and folk medicine with examples from the literature on the misunderstood alternative health practice common on the US/Mexican border.

Setting/Subjects: Over fifty academic online databases and a given search term.

Methodology: Systematic search of 49 subscription databases plus PubMed 251 unique records retrieved were coded using ProCite. Articles were then coded for content.

Results: Curanderismo as a search term yielded different results if truncated as a keyword in title or abstract. Results improved if the database searched the full text of an article. False hits were numerous. Twelve percent pertain to healing practices in countries such as Spain, Portugal, Peru, Cuba, etc. Of the 37 items indexed in ISI's Web of Science, 4 were poems and 2 were letters. Only 18 of the articles were ever cited. Only 16 of the ISI items were indexed in PubMed. Ovid MEDLINE missed 2 articles retrieved using PubMed. Content analysis of the texts of articles indicate that there is a growing movement to integrate curanderismo into medical practice.

Discussion/Conclusion: Little has been written about curanderismo as practiced on the US/Mexico border. Compiling a comprehensive bibliography is complicated by the fact that the term, curandero/a is Spanish for "healer." Records are also retrieved on curanderismo as practiced in other geographic areas of the Spanish and Portuguese speaking world. Although similar in many elements, curanderismo as practiced along the border is a different medical system than curanderismo practiced along the Amazon. Limited in scope, much of the material on curanderismo tends to be biographical (i.e., the writer documents how a specific healer practices his/her "art"). Master healers are alluded to. Occasionally, the medical model underlying curanderismo is placed in the context of pre-Columbian medicine but not to the extent that an outsider would recognize. Nonetheless, articles are appearing advocating including curandero/as into patient care. Working side by side, biomedically trained physicians treat patients with the assistance of folk healers, thus addressing the folk beliefs of the patients and the community as a whole.

The Emergence of Integrative Medicine on the Health Sciences Campus: Challenges and Opportunities for Librarians

David J. Owen, education coordinator and senior information consultant, and **Min-Lin E. Fang,** information services librarian, Kalmanovitz Library and Center for Knowledge Management, University of California–San Francisco

Purpose: A movement is now underway to integrate complementary and alternative medicine (CAM) therapies and techniques with current mainstream health care treatments. This paper will report on how health sciences librarians can play important roles in supporting such integrative medicine programs.

Setting: The library supports a large and diverse population of faculty and research staff in both the clinical and basic sciences. A new integrative medicine center has significantly increased support for CAM and been responsible for the introduction of CAM issues into the medical curriculum.

Brief Description: Integrative medicine refers to the merging of CAM with conventional biomedicine. Health care facilities are increasingly using CAM therapies and techniques and many medical leaders are calling for physicians to become more knowledgeable about alternative medicine, with close to 70% of US medical schools now including some aspect of CAM in their curricula. CAM presents many challenges and opportunities for librarians because of the lack of evidence of effectiveness for many commonly used therapies and the corresponding paucity of reliable information resources. This paper will describe issues relating to librarian involvement in integrative medicine programs on a health science campus, including collection development, instruction and collaborative projects with faculty.

Is Energy Healing Effective? A Systematic Review

Barbara J. Nail-Chiwetalu, health librarian, Theodore R. McKeldin Library, University of Maryland–College Park

Objective: What evidence exists on the effectiveness of energy healing practices on individuals as a form of complementary or alternative medicine?

Methods: Data Sources: Sources of research evidence included: (1) major scholarly databases, (2) reference lists from included studies and articles, (3) citation searching on key articles, (4) hand-searching of key journals, (5) research registers, and (6) the Internet. All available years were included.

Study Selection: Both evaluative and descriptive evidence published in English were included. The primary focus was on the United States, although evidence from other countries was also considered when readily found in the published literature. To make this review manageable and focused, literature on the use of reiki as the primary healing practice was reviewed. Review articles on specific forms of energy or spiritual healing, such as therapeutic touch, healing touch, and distant healing, were used for comparison purposes.

Data Extraction: Key data and themes were extracted from the evaluative and descriptive literature using a predetermined "evidence table" and narrative.

Results: Preliminary results were obtained from twenty-three articles categorized as: (1) personal experience, (2) anecdotal report, (3) qualitative research, (4) observational studies, (5) randomized controlled trials, or (6) pilot or exploratory studies. Reiki was the solo or primary treatment. Nonexperimental evidence reported reiki to be effective for reduction in physical symptoms such as pain, headaches, side effects from drugs, and fatigue, as well as psychological states. Pilot or exploratory studies primarily investigated types of measures that may be used to study the effects of energy healing, such as physiological changes, anxiety and pain scales, depression and stress inventories, and self-report questionnaires.

Conclusions: Clearly, the study of the effectiveness of energy healing does not readily lend itself to the "gold standards" of empirical research in allopathic medicine. Researchers are exploring ways to measure the effects of energy healing while maintaining the rigor of empirical research for acceptance in the Western medical community.

Choices, Challenges, and Leaps of Faith: African Americans in Chiropractic

Glenda Wiese, special collections librarian and archivist, David D. Palmer Health Sciences Library, Palmer College of Chiropractic, Davenport, IA

African Americans are severely underrepresented in the chiropractic profession, even more so than they are in other health sciences professions. Those who desire to become chiropractors must set out on a lengthy and complicated journey through high school, college, chiropractic school, and transition to practice. The passage through these stages presents significant challenges for many. If more African Americans are to enter and graduate from chiropractic school, chiropractic and education professionals need further insight into the perspectives and experiences of African American students who have successfully traversed the "pipeline" known as chiropractic education. Such insight will enable chiropractic educators to better understand the conditions which promote success in achieving this goal and apply that knowledge in addressing the problem of underrepesentation of African Americans in chiropractic. How do those who have successfully completed this journey perceive their experiences? This qualitative study addresses this question through analysis of interviews with sixteen African American chiropractors. They were asked to reconstruct their educational experiences and to reflect on those experiences. The results were: (1) most students experienced incidents of racism while in chiropractic college; (2) several experienced academic difficulty; (3) most reported that the support of the minority student organizations on their campus was critical to their success; (4) the transition from academic training to practice was as stressful as the formal educational process; and (5) most of the participants practiced in areas with large minority populations and the majority of their patients were minorities. Recommendations include: heavier emphasis on recruiting at historically black colleges and universities; the formation and continued support of organizations like the Student Chapter of the American Black Chiropractor's Association or the Harvey Lillard Club; wider availability and marketing of academic support services such as counseling and tutoring; and programs to inculcate cultural sensitivity for chiropractic college staff and faculty.

Leadership and Management and Hospital Libraries Sections

Managing Library Schizophrenia (Part 1): Staffing

Monday, May 16, 2:30 p.m.–4:00 p.m.

Divining the Future for a Divine Future: Using a "Futures Committee" to Imagine the Library We Want

Gerald J. Perry, AHIP, deputy director, Administration; **Clark Driese**, library technician III, Access Services; **Lilian Hoffecker, AHIP**, reference and education librarian, Reference; **Daphne Hyatt**, acquisitions librarian, Systems and Databases; **Jeff Kuntzman**, information technology librarian, Systems and Databases; and **Wanda Weathersby**, library technician III, Reference; Denison Memorial Library, University of Colorado–Denver

Objective: This paper examines the use of a library "Futures Committee" in order to create and sustain an active library-wide dialog about future opportunities and challenges for our library.
Setting: An academic health sciences library.
Participants: The committee is made up of staff from most departments and includes administrative, faculty, and classified staff members. Committee programming is open to all.
Resources: Our imagination and the desire and capacity to contribute.
Methods: Staff of our library have the envious opportunity to contribute to creating a new library as part of the development of a new health sciences campus in our state university system. To bring that new library and its services to life, it is necessary to imagine our future with all its possibilities. The library's Futures Committee was established to facilitate our collective imagination by scheduling speakers such as campus deans, organizing journal clubs, holding debates, and pro-

gramming facilitated conversations in order to discuss topics such as: establishing in the new library a single service desk whereas we now operate from three, the mix of generations in the library-as-workplace, and what the deans of our schools need and expect from the library, and what we need from them in return, among other issues.
Results: After a series of informative conversations with the deans from each of our campus' schools, the Futures Committee next embarked on an ambitious series of conversations throughout much of 2004 and 2005 addressing the creation of a single service desk in the planned new library. These discussions included journal clubbing, visioning presentations, and roundtable conversations based on anonymous comments submitted via our Futures Committee Blog. Our next futures conversation series will address "hot new technologies" now being used in libraries, such as RSS, tablets, providing shared document access, and the like.
Conclusions: Our anecdotal experience is that a Futures Committee is an effective mechanism to coordinate and sustain threaded and inclusive conversations about new opportunities. Futures Committee events promote thinking beyond next week or next year and provide a "space" for conjecture and an opportunity not to lose long-term vision.

Much Ado about Staffing

Gillian G. Mayman, publc health informationist; **Nancy Allee, AHIP**, director; **Jonathan Koffel**, university library associate; **Deborah Lauseng**, reference and instruction librarian; **Helen Look**, collection development librarian; and **Monique Uzelac**, information resources specialist; Public Health Library and Informatics, University of Michigan–Ann Arbor

Objective: Skit Outline: This skit will demonstrate the variety of nontraditional staffing in a medium-sized academic health sciences library. Performed humorously, the skit will share the library's experiences in trying to meet and exceed patron needs.
Methods: Scenario: a professor visits the library looking for a book. As he expands upon his needs, he eventually works with each staff member in the library, using the full range of nontraditional services.
1. A patron comes to the circulation desk and requests a book.
2. The reference librarian teaches him how to search databases.
3. The multimedia lab coordinator shows him how to digitize the book chapter.
4. The Webmaster helps him put the book chapter online.
5. The electronic reserves assistant explains copyright.
6. The informationist convinces him to offer his course online to public health professionals.
7. The instructional technology coordinator discusses available services for distance learning.
8. The special projects librarian helps him find a grant to fund his outreach project.
9. The instructional designer consults on how best to present his information online.
10. The video production specialist creates streaming videos and CD-ROMs and puts everything online.
11. The collection development librarian catalogs the Website and CD-ROMs.
Results: The library remains vital and relevant to our user community.
Conclusions: Library staffing must continually evolve to meet new user needs while still providing core services.

How Diversity Affects Communication

Mary E. Piorun, AHIP, associate director, Library Systems; **James Comes, AHIP**, associate director, Information and Reference Services; **Barbara Ingrassia, AHIP**, associate director, Technical Services; and **Jane Fama**, associate director, Access Services; Lamar Soutter Medical Library, University of Massachusetts Medical School–Worcester

Objective: Skit: Demonstrate how differences such as generation, personality, work experiences, gender, etc., affect workplace communication and its impact on getting the job done.

Methods: We will perform two four-minute skits. Each will highlight a different aspect of the "communication gap." We will facilitate discussion among the audience after each skit.

1. Skit I: How We Communicate: A group of workers is pulled together to work on a new project. Everyone interprets the assignment differently. Proposed solutions range from the traditional to high tech. Discussion Topic: How do managers make sure everyone hears the same message? How do we make sure that everyone is heard? Do we use jargon as a source of power?

2. Skit II: Communication Trust: An experienced professional provides "mentoring" to a new employee. In turn the new employee offers technical advice to the experienced person. Discussion Topic: In the absence of trust is mentoring viewed as criticism? Is there such a thing as reverse mentoring?

Conclusions: Communication is the backbone of an effective organization. The greater your awareness of your own personal communication style and that of those around you, the more likely it is that you will foster an atmosphere of understanding, trust, acceptance, and openness. Employees will be more open to sharing their ideas and working together, resulting in an organization more likely to meet its goals and fulfill its mission.

The Circle of Life: The Deconstruction and Subsequent Reconstruction of the Traditional Reference Desk

Sandra L. De Groote, AHIP, assistant information services librarian; **Kristin Hitchcock**, resident librarian; and **Richard McGowan**, assistant information services librarian; Library of the Health Sciences, University of Illinois–Chicago

Objective: In 1995, multiple service points created at an academic library triaged questions. An information desk, staffed by technical assistants, answered ready-reference and directional questions. In-depth and instructional questions were referred to an office staffed by librarians. In fall 2004, service points were reconsolidated due to reduced questions, reduced staff, and virtual reference demands. Questions asked during this period are examined.

Methods: A health sciences library at a large urban university offers reference services to faculty/staff, students, and community members seven days a week in-person and over the phone. For a one-month period in 1996, a sampling of the types of questions asked at a newly created information desk were recorded. In the fall of 2003, and again in the fall of 2004 after the two service points were consolidated, questions were coded for a one-month period. The types of questions asked and the demographics of users will be compared for each year to determine if there is change in the types of questions asked, depending on the service points offered and time period.

Results: The number of reference questions increased after the implementation of two service points. This shift increased the number of in-depth questions and decreased the number of ready reference and directional questions answered by reference librarians. The reconsolidation of services did not impact the overall number of questions asked; although the number of questions handled by reference librarians did increase. There was a decrease in all types of questions asked, with the exception of directional and in-depth research consultation questions. In 1996, 2003, and 2004, the most common questions asked were related to directions, book holdings, and journal holdings.

Conclusions: With a significant decrease in the number of traditional reference questions asked and an increase in the number of digital reference questions asked, consolidating information service points can reduce staffing demands and increase the librarians' profile.

Diversity

History of the Health Sciences, Chiropractic Libraries, and Relevant Issues Sections and Lesbian, Gay, Bisexual, and Transgendered Health Sciences Librarians SIG

Overcoming Challenges: Magnificent Medical Contributions

Monday, May 16, 2:30 p.m.–4:00 p.m.

Highly Qualified, Never Appointed

Lucretia W. McClure, AHIP, FMLA, special assistant to the director, Countway Library of Medicine, Harvard Medical School, Boston, MA

Objective: The objective is to evaluate the remarkable career of neuropathologist Myrtelle Moore Canavan (1879–1953) to determine if being a woman was the reason why she never received an appointment at Harvard Medical School despite the fact that she was appointed curator of the Warren Anatomical Museum at Harvard.

Methods: The purpose of the study is to review the education, experience, and papers and publications of Canavan to establish the significance of her work in comparison with other neuropathologists of the time. The papers and 79 publications by Canavan are available, including the 1931 publication in which she identified a progressive degenerative disease in infants that bears her name. Canavan was pathologist to the Massachusetts Department of Mental Diseases. She was appointed associate professor of neuropathology at the Boston University School of Medicine and taught at the University of Vermont School of Medicine. During her tenure as curator, she strengthened the collections of the Warren Museum, acquiring some 1,500 specimens for research and teaching.

Results: Canavan's qualifications were measured against those of three Harvard pathologists. Reviewed were their teaching responsibilities and publications.

Conclusions: The review showed that Canavan was a highly qualified neuropathologist, whose accomplishments and honors equaled those at Harvard. She was curator of the Warren Museum but never appointed to the Harvard Medical School. But then, she was a woman.

Tales of a Reservation Nurse: The Heroic Life of Edith LeRoy Richardson

Valeri Craigle, digital services librarian, and **Joan M. Stoddart, AHIP**, deputy director, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: Edith LeRoy Richardson, the granddaughter of a Ute Indian chief and a certified nurse, helped to improve the health of Native Americans in the reservations of Utah, Oregon, and Oklahoma. Richardson's nursing abilities, as well as her belief in the importance of preserving the hope and dignity of the individual, made her an important figure in the history of Native American health care.

Methods: After centuries of war and exposure to numerous illnesses, the health of Native Americans in the nineteenth century American West was in serious jeopardy. At a time when resources were scarce and culturally competent care virtually nonexistent in Native American custodial agencies, there was a desperate need for medical professionals who understood the physical and cultural issues facing these suffering communities. As a nurse and a member of the Native American community, Richardson was able to bridge these disparities in care. Richardson's friends and family have paid tribute to her life by collecting photographs, newspaper clippings, and diaries in the years since her death in 1977. These materials are compiled into three beautifully

preserved scrapbooks, which reside in a special collections department at a university library. It is from these historically significant materials that Richardson's life story is recounted.

A Biographic Look at Early Women Pharmacists

Marilyn H. Steinberg, head, Reference and Instruction Services, and **Patricia McNary**, electronic services librarian, Sheppard Library, Massachusetts College of Pharmacy and Health Sciences–Boston

Objective: To present biographies of early women pharmacists who overcame obstacles to attain positions in a formerly male-dominated profession and to prepare a traveling exhibit for distribution across the country at other schools of pharmacy or as a tool for recruitment into the profession.

Methods: Research in archives, schools of pharmacy, and professional societies' early records to identify and present the lives of early women pharmacists, with emphasis on their challenges, particularly of gender discrimination, and other obstacles, to attain their desired goals.

Ruth Janetta Temple: A Community Health Hero for Los Angeles

Andrea Y. Griffith, reference librarian,; **Carlene Drake**, acting director; and **Marilyn Crane, AHIP**, interim chair, Department of Archives and Special Collections; Del E. Webb Memorial Library, Loma Linda University, Loma Linda, CA

Objective: This poster will highlight the career and accomplishments of Ruth J. Temple, community health crusader and the first African American female graduate of Loma Linda University (1918).

Methods: Using photographs and text, this poster will describe Temple's many accomplishments and medical interests, including the foundation of a health study club to educate the community on nutrition, sex education, immunization, and substance abuse. Pushing the barriers placed on African American women of the time, Temple committed herself to community health issues in the city of Los Angeles. The example of her life and accomplishments qualify her as a hero for women and the underprivileged.

Results: Temple graduated from the College of Medical Evangelists, what is now Loma Linda University, as a physician, in 1918. Upon graduation, she made $28 a month as an intern with the director of maternity service for the Los Angeles Health Department. Temple and her husband, Otis Banks, bought a house in East Los Angeles and began a free health clinic, later naming it the Temple Health Institute. Overcoming the prejudices of the time, Temple was on the teaching staff of White Memorial Hospital teaching white medical students. In 1941, the city health department gave Temple a scholarship to attend Yale University for a master's in public health; later, Temple held many positions with the Los Angeles Public Health Department. In 1983, the East Los Angeles Health Center was renamed the Dr. Ruth Temple Health Center. After a long life of both providing and advocating for access to health care, Temple died in 1984 at the age of ninety-one.

Conclusions: Ruth Temple is an inspiration and a hero for not only overcoming great obstacles in becoming a physician, but also for advocating whole-person health for the entire community and other public health issues for over fifty years.

From Self Doubt to Surgeon: Benjamin S. Carson Sr.

Ophelia T. Morey, senior assistant librarian, Health Sciences Library, University at Buffalo, Buffalo, NY

Objectives: This poster will illustrate how an African American young boy, who was nicknamed "Dummy," grew up to become a world-renown pediatric neurosurgeon.

Methods: Graphics and Carson's enlightening words will show how he overcame self-doubt, poverty, and racism.

Colorful Medicine: Breaking Barriers, Stereotypes, and Making Strides

Tomeka Oubichon, public services librarian, Administration on Aging Library, AOA, Washington, DC; **Shannon Jones**, outreach librarian, Education Services, Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond; and **Cassandra Allen**, outreach librarian, Office of Outreach and Special Populations, National Library of Medicine, Bethesda, MD

Objective: To highlight the significant contributions that several lesser-known African American physicians have made to medicine while overcoming significant racial and economic challenges.

Methods: African American physicians and medical practitioners around the country make significant contributions to the field of medicine locally and nationally. They have accomplished significant feats in medicine with no recognition or accolades. This poster will focus on the contributions that several selected lesser-known African American physicians have made within their local communities and to medicine.

Medical Library Education Section

Celebrating Diversity of New Perspectives

Monday, May 16, 2:30 p.m.–4:00 p.m.

Information Behaviors in an Online Smoking Cessation Community

Carol Perryman, fellow, PhD Student, School of Information and Library Science, University of North Carolina–Chapel Hill, Durham, NC

Objective: Explore the information use environment (IUE) of people attempting to quit smoking using a Web-based cessation forum; examine this population's perceptions of support received from various channels, including family, peers both on- and off-line, and health care professionals.

Methods: Fourteen participants in a Web-based forum responded to a semi-structured survey that inquired about medications and decision support resources and then asked participants to evaluate their experiences. Next, 371 cessation-related messages from the forum were compiled, categorized, and analyzed for content to better understand the importance and frequency of specific types of cessation-related information transactions. Current "gold standard" cessation literature was compared to survey responses and forum messages, with an initial hypothesis that a gap existed between the two.

Results: Survey respondents viewed the existence of an online community of peers as a positive factor in their cessation effort. Although no attempt was made to generalize findings beyond the initial pilot, gaps were tentatively identified between support provided by health care and in-person community resources and information needs expressed by this population.

Conclusions: In their provision of a milieu for the exchange of cessation-related information and community support, online forums may enable support at a depth and quantity unavailable through more immediate channels. Further studies are needed to develop a better understanding of the information-related behaviors of this population.

Exploring the Information Behavior and Needs of Medical Relief Agencies: Current and Future Roles for Medical Librarians and Informatics Tools in Medical Relief Information Services

Jennie A. Abrahamson, NLM fellow and doctoral student, Medical Informatics and Clinical Epidemiology, Oregon Health & Science University–Portland

Objectives:
1. To develop and share an understanding of the unique information behavior and needs of international medical relief agencies.
2. To survey medical librarians and relief agencies to determine how the information needs of these dynamic organizations are currently being met and how they might best be met in the future by medical librarians and informatics tools.

Methods: Case study. Phase one (completed): literature review. Since this population is underrepresented in the information needs literature to date, a wide variety of resources were consulted. Several library and information science, health sciences, and related social sciences databases were searched. Selected bibliographies from the initial database search were citation searched, and selected journals were hand searched. Primary literature from a representative relief organization was also reviewed. Phase two (in process): a Web-based survey of medical relief agencies and librarians currently serving them. Individuals from both constituencies will be selected to participate in follow-up interviews in-person, via phone, and/or email. Representatives from developers of informatics tools either currently or potentially of use to medical relief agencies will also be interviewed to aid in determining the viability of suggestions for further information service provision that will result from this research.

Results: Phase one results reveal that the information needs of medical relief agencies vary depending upon team composition, location, and cause of the situations they work in, including natural or man-made disasters and/or wars or conflicts. These agencies share similar information needs with primary, rural, and naval primary care providers, as well as clinical and emergency teams. Completion of phase two of this project is delayed due to the medical relief agency community's necessary response to the recent Asian tsunami. Latest available data will be shared at the presentation.

Conclusions: Digital libraries and other digital tools show promise for information provision, and a number of library and information professionals already contribute to serving the information needs of this user group. Further research regarding how this population actually uses information is recommended to enhance information service provision to them.

How Are We Doing? An Assessment of Virtual Reference Services in Academic Health Sciences Libraries

Jodi L. Philbrick, doctoral student and teaching assistant, School of Library and Information Sciences, University of North Texas–Denton

Objectives: The objectives of this descriptive study are:
1. To assess the current offering of virtual reference services in academic health sciences libraries nationwide.
2. To determine the methods used by academic health sciences libraries to describe and visually represent their services on their Websites.

Study Population: Websites of academic health sciences libraries nationwide that are represented in the Membership Directory of the Association of Academic Health Sciences Libraries <www.aahsl.org/new/about/directory.cfm>.

Methods: The researcher will examine the Websites of academic health sciences libraries identified above to determine what types of virtual reference services are offered, such as email reference and/or chat reference. Also, the researcher will study how the virtual reference services are identified, such as "Ask a Librarian" or "AskUsNow." Visual representation of virtual reference services is another important element, so the researcher will look at where the services are placed on the Websites and if the services are represented by visual icons.

Anticipated Results: The researcher expects that most academic health sciences libraries will offer email reference services to their users. As far as how the services are identified and visually represented,

the researcher anticipates this will vary slightly from library to library, depending on the resources they have to offer virtual references services.

Education and Outreach

Consumer and Patient Health Information, Corporate Information Services, Dental, Medical Informatics, Pharmacy and Drug Information, Public Health/Health Administration, Public Services, and Research Sections

Reaching Out Magnificently to All at All Points of Care or Need

Monday, May 16, 2:30 p.m.–4:00 p.m.

Reaching Them Where They Live: Bringing Health Care Internet Information to Senior Residences

David A. Nolfi, AHIP, health sciences librarian, Gumberg Library; **Robert J. Campbell**, assistant professor, Rangos School of Health Sciences; and **Lenore Resick**, director, Nurse-Managed Wellness Centers, and associate professor; and **Maureen Leonardo**, assistant professor, School of Nursing; Duquesne University, Pittsburgh, PA

Objective: This paper will report on a project to teach low-income and African American seniors to use the Internet to find and evaluate health care information on the Internet. The authors hypothesize that access to high-quality information will help participants take a greater role in managing their health care and ultimately empower them with increased perception of control over their health.

Methods: Funded by a National Network of Libraries of Medicine (NN/LM) contract, the authors purchased computers and Internet access for two urban senior residences: the predominantly African American Irvis Tower and the low-income St. Justin Plaza. The authors will conduct small group, five-week training sessions teaching seniors to:
• access the Internet
• find and evaluate health information
• locate and use high quality health Websites
The authors met with building tenant groups, administrators, and caregivers to discuss residents' health care information needs and concerns in order to better inform session planning. Using qualitative methods, the authors will assess post-session changes in participants' interactions with health care providers. They will use the Multidimensional Health Locus of Control (MHLC) to measure changes in participants' perceptions of control over their health. Using the Omaha System, the authors will assess residents' health status and perceptions of health care before and after the sessions.

Results: The first phase of the study showed increases in participants' mean MHLC scores for perception of internal health locus of control, while perceptions of external and chance control decreased. The investigators also observed increased interest in using the Internet, witnessing study participants continuing to work after classes. Staff teaching the classes have also noted differing collective personalities among the groups in each residence.

Conclusions: Early results have shown mixed statistical significance. The authors believe that statistical significance will increase as the numbers of responses increase for each instrument. Additional classes are now being offered in the senior residences as well as senior community centers throughout Pittsburgh. A consistent finding is that male participants have a lower perception of control over their health as well as less interest in attending the classes. More research is needed to determine why senior males' perceptions and interests differed from senior females.

When Was the Last Time You Provided Training at Your Local Firehouse?

Martha Szczur, deputy associate director, and **Bijan Mashayekhi**, computer scientist, Specialized Information Services Division, National Library of Medicine, National Institutes of Health/Health and Human Services, Bethesda, MD, and **Lian Ruan**, director/head librarian, Library, Illinois Fire Service Institute, Champaign, IL

Objective: Reaching out to the emergency responder (ER) community: addressing the ER's need for health and safety information on hazardous chemicals.

Methods: For ERs, having accurate and timely information at the right time can save lives. NLM has developed an application, Wireless Information System for Emergency Responders (WISER), which addresses the ER's need for integrated health and safety information on hazardous chemicals quickly and conveniently on mobile devices (e.g., PDAs). While working closely with local fire chiefs, we learned that many of the other NLM information resources are of interest and use to the ERs, both for their understanding of emergency-related health topics and for use when they conduct outreach to their communities. Discussion will include training challenges unique to this population and evaluation program results. The paper will discuss plans for further enhancements based on feedback and lessons learned, such as improved decision-support algorithms in WISER, interactive training tools, and additional information resources for use with their community outreach activities.

Results: Through feedback from training courses, NLM is learning about the emergency responders' information needs. For example, responders to a hazardous material (Hazmat) incident include the first-on-the-scene, the incident commander, Hazmat specialists, and emergency medical specialists. NLM has used training sessions to help understand the right information needed by each type of emergency responder. For development of WISER, three key requirements were identified: (1) accurate authoritative information about the chemical, if the chemical is known; (2) assistance with identifying the chemical, if it is unknown; and (3) information presentation that facilitates quick comprehension.

Conclusions: Firefighters have not traditionally been a target audience for training by medical librarians. However with over 33,000 Hazmat incidences reported in 2004, ERs have an increasing need for accurate chemical information. NLM is working with the first responder community to better meet their information needs.

Reaching Out to the Indian Health Services

Diane Gelarden Cooper, AHIP, informationist, NIH Library, National Institutes of Health, Bethesda, MD

Objective: The Indian Health Service (IHS) is a national health care system for Native Americans. In 2004, a new Informationist outreach program for the IHS was launched with goals to identify and provide for the information needs of the diverse IHS system. This study assesses the impact of the new program.

Methods: The IHS includes physicians, nurses, pharmacists, and others, who work in a range of settings from isolated rural areas to metropolitan locations. An informationist promotes a new Website, provides filtered searches, writes a library column in an IHS journal, and develops a network of library service field contacts. Prior to launching the new service, a convenience sample of key IHS health care providers was selected for an open-ended interview. The interview covered perceived frequency of need for library services, types of services, how they were usually obtained, and general satisfaction. The brief interview was conducted by email with telephone follow up. Subjects were urged to amplify their responses with narrative. The interview was repeated three months later. Using a qualitative research approach, results were analyzed for both specifics and for emergent themes. Differences in impact by specialty and location are described.

Results: Qualitative analysis of the baseline survey produced three themes. IHS clinicians need (1) timely information at the point of direct patient care, (2) to develop guidelines specific for their population, and (3) presentation sources. Perceived barriers were lack of library resources, limited time, and insufficient knowledge of available resources. The informationist provided applicable informationist roles as a promoter and trainer and obtained participatory roles in IHS information project teams. On the follow up, needs remained the same. Participants noted an improvement in accessing needed information and indicated value in having a designated contact person who was knowledgeable about their particular information needs.

Conclusions: Qualitative analysis of before/after surveys indicates IHS clinicians need immediate point of care clinical information. They lacked timely access to medical journals, textbooks, databases, and document delivery. An informationist assigned to help meet those needs improved perception of access.

Reaching Out to the Faith-based Community

Brenda Green, coordinator, Instructional Services, Health Sciences Library, and **Cassandra B. Holder-Ballard**, associate professor, Department of Dental Hygiene, University of Tennessee Health Science Center–Memphis

Program Description: This program was a health literacy outreach effort combining a seminar and a hands-on computer workshop to help the target group learn to access health care information and thus lessen health disparities that exist among members of the target group.

Setting: A 5,000 member African American church located in the Mid-South was the setting.

Participants: Congregants, members of the church's Health Ministry group, participants at a youth rally, and local health care professionals participated in this program.

Program: The program included a one-hour presentation by a health care professional followed by a two-hour hands-on workshop in the church's computer lab. During the lab, participants were introduced to MedlinePlus and ClinicalTrials.gov, learned how to evaluate health care information on the Internet, and were given resources to facilitate their ongoing access to information. Four programs were presented on diseases that disproportionately affect African Americans. The church's Health Ministry group participated in program content development, publicity and promotion, integration into an existing church program, and evaluation. A survey captured the extent of congregant's access to health care information, demographic background, and health history.

Main Results: The survey indicated the most significant barrier to accessing current, reliable health care information was time, with 50% of the subjects reporting this limitation. Schedule constraints appeared to be a major factor in the level of participation throughout the project. All participants were African American, with ages ranging from less than 20 through 65. However, most of the participants were between 20 and 35 years old. Relative to health history, participants were asked if they have, or know someone who has, dental disease, AIDS or HIV, hypertension, or diabetes. Diabetes had the largest representation (70%), followed by hypertension (64%), dental disease (23%), and AIDS or HIV (14%).

Conclusion: When conducting a health literacy program at a faith-based institution, consider the ethnicity, age, access to computerized sources of health care information, and the time constraints of potential participants. The four health topics covered in this program were relevant and the methodology reinforced the content during the dual program sessions.

Technical Services and Leadership and Management Sections

Educate, Enrich, and Enhance: Technical Services Internal Educational Outreach/Eduque, Enriquezca y Realce: Extendiendo la Educacion Interna de los Servicios Técnicos

Monday, May 16, 2:30 p.m.–4:00 p.m.

Innovative Roles for Technical Services Librarians: Extending Our Reach

Joan M. Gregory, AHIP, technical services librarian; **Alice I. Weber**, collection development librarian; and **Shona R. Dippie**, metadata librarian, HEAL Project; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: The traditional technical services librarian rarely ventured out of the backroom. Today, the sphere of influence of the technical services librarian extends throughout and beyond the library. The objective of this paper is to encourage technical services librarians to embrace these new opportunities for sharing their expertise in the development and management of knowledge.
Methods: This paper will share examples of formal and informal educational outreach to colleagues and users by technical services librarians at the University of Utah Spencer S. Eccles Health Sciences Library.
Results: Technical services professionals have used their unique knowledge and skills inside and outside the conventional library venue to successfully generate new outreach opportunities, including: knowledge management collaborations with library colleagues, academic departments, and other organizations; database development and instruction; teaching and reference activities; implementing creative catalog use; creating and improving metadata standards; and facilitating the development of and access to digital collections. They have educated colleagues and users about the value of knowledge organization principles, procedures, and tools.
Conclusions: Eccles Library technical services librarians have made significant contributions to a wide range of collaborative projects. By focusing on user needs, they have taken on innovative roles and have extended their reach and impact.

On Beyond the Online Public Access Catalog (OPAC): Repurposing Integrated Library System Data for Web-based Access Tools

Malgorzata Fort, head, Bibliographic Services; **Phillip Bergen**, information architect; and **Deborah Silverman**, associate director, Resource Management; Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: The integrated library system (ILS) stores useful and valuable information about library resources. This paper examines one library's experience integrating ILS data into Web-based user tools, and the advantages and the challenges for technical services of managing data to support multiple uses.
Methods: The ILS offers advantages for managing bibliographic data not just for presentation via the online public access catalog (OPAC) but for reuse in a variety of Web-based access tools. Centralized creation and management of bibliographic data in the ILS offers process efficiency and consistency of data representation with minimal duplication of effort. However, this presents a challenge for technical services, who must balance traditional adherence to established standards and system requirements with the competing demands of new Web-based access tools. Policy decisions in technical services regarding data cre-

ation and management must protect process efficiency and data quality while providing the flexibility to support a variety of uses, now and in the future.

Beyond the "Back Room": Technical Services Staff as Integral Partners in Providing Library Services

Betty Landesman, head, Collection Management, and **Rosalie Holmes Stroman**, chief, Collection Management and Delivery Branch, NIH Library, National Institutes of Health, Bethesda, MD

Objective: To maximize the use of the skills of all personnel in the provision of effective library services by enabling and encouraging technical services staff in expanding their interaction with and service to other library departments, the public, and employees of the organization.
Methods: The Collection Management and Delivery Branch (CMDB) provides the technical services functions of the library: acquisitions, serials, cataloging, interlibrary loan/document delivery, and circulation services. Automation and changing strategic directions caused the library to examine both its service needs and its organization. A new program was developed to recruit technicians from CMDB to be trained to work at the Information Desk. Another team was challenged to rethink its core business and develop an explicit statement of its function, its internal and external customers, and the services it can provide for those customers, including fee-based custom services. This paper will examine the outcomes of these organizational and conceptual changes and describe our experience in reenvisioning technical services as an effective partner in achieving the library's mission.
Results: Surveys indicated that 90% of questions received at the Information Desk did not require librarian intervention. Recruitment of current library technicians as reference assistants began in 2000. As of 2005, reference assistants exclusively staff the Information Desk with librarians on call when needed. Collection Management Team staff began to define its business and customers in 2003. In 2004, they assumed full responsibility for maintaining the library's electronic resources. Now, they continually analyze cataloging and other procedures used in maintaining the integrated library system, and add value-added information where possible, to provide the best service for its customers.
Conclusions: Increasing reliance on electronic resources and systems for library services provided the impetus to reexamine staff functions. Extensive training was key to staff's seeing new roles for themselves as integral partners in providing effective services to their customers and being recognized as integral partners by those customers.

Coming Out of the Back Room: Technical Services Breaks Loose

Lisa Palmer, catalog librarian, and **Barbara C. Ingrassia, AHIP**, associate director, Technical Services, Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: Describe how technical services librarians at an academic medical center have embraced opportunities for campus outreach. The library has long been committed to teamwork. As members of cross-departmental library teams and campuswide task forces, technical services librarians have utilized skills in information organization, integrated library systems, and problem solving to benefit colleagues, faculty, clinicians, students, and the public.
Methods: Case Study: Since the arrival of a new director in 1998, much of the work of the library is accomplished through cross-functional teams. Technical services librarians have contributed significantly to these teams and to campuswide task forces. For a project to create a database of medical images, library catalogers performed crucial roles in developing a database and record structure, maintaining quality control, writing documentation, and training faculty members. This team is now collaborating with Academic Computing staff to develop

an institutional repository. Within the library, a cataloger joined an access services team charged with examining the problem of unreturned books, enhancing the team with skills in integrated library systems, problem solving, and report writing. Recognizing the importance of open access, a technical services librarian organized a well-attended forum and display for the campus and the public.

Results: The positive impact of technical services outreach included new and enhanced services and products, professional satisfaction, improved communication among staff, and better access to library materials. Technical services librarians are better known to the larger campus community. Staff development, collaboration, and outreach were enhanced by a library renovation that kept the technical services department in close proximity to public services areas and the library training room. In the library, there is now a true partnership with public services staff, and an increased appreciation for the skill set of technical services librarians.

Conclusions: Technical services librarians should not hesitate to break out of the back room and participate in outreach activities. Their skills can be of tremendous value to cross-departmental library teams and broader efforts. This outreach benefits the librarians, the library, and the user community.

Research

Research, Consumer and Patient Health Information, and Hospital Libraries Sections and Assessment and Benchmarking SIG

Research Methodology 101 (Part I): Yes, You Can Do Research!

Monday, May 16, 2:30 p.m.–4:00 p.m.

Diversity in Datasets: A Primer in Descriptive Statistics

Douglas J. Joubert, biomedical informationist, NIH Library, National Institutes of Health, Bethesda, MD

Objective: This paper examines the commonly encountered methodological and quantitative concepts involved in computing and analyzing descriptive statistics.

Methods: Using a subset of data from a larger research project, this paper describes the analytical considerations frequently encountered when describing and differentiating sample data into meaningful categories. By means of nonmathematical language, this paper includes a discussion of sampling, internal and external validity, levels of measurement, samples and populations, and descriptive techniques for summarizing data. The presenter will provide examples using the Analysis ToolPak AddIn included with Microsoft Excel and JMP from SAS.

Conclusions: An understanding of descriptive statistics is vital, as the findings of most biomedical research are disseminated by the use of descriptive statistics. Additionally, being cognizant of the most common analytical and statistical techniques involved in basic research not only increases the validity of research but also strengthens the level of accountability of research in our profession.

Focus Groups: Gathering Strategic Information

Beverly A. Gresehover, assistant director, Access Services, and **Alexa Mayo, AHIP**, assistant director, Information and Instructional Technology, Health Sciences and Human Services Library, University of Maryland–Baltimore

Objective: To report on focus group interviewing in support of three library projects, identify the benefits of using this research method, and outline the preparation and resources required to employ focus groups.

Methods: The focus group technique involves a small group of people brought together to discuss a topic in which participants share knowledge. This health sciences library applied focus group interviewing to assess users' perceptions of the library Website, to obtain information about improving access to health information in this state, and to learn about the aspirations of new health sciences librarians. Informed by the data gathered, Library faculty were able to make meaningful decisions about the library and its services. This paper will outline the process of running a focus group: using pilot groups to practice facilitation skills, identifying participants, developing questions, and recording and evaluating data. This paper will also discuss the findings of the focus groups and how they influenced each project.

Navigating the Research Maze: An Eighteen-month Collaboration

Hanna Kwasik, AHIP, serials librarian, and **Pauline O. Fulda, AHIP,** associate director, Library, Louisiana State University Health Sciences Center–New Orleans

Objective: To describe, illustrate, and facilitate understanding of all phases and components of a complex research project, whose purpose was to evaluate an MLA mentoring program initiative from national and regional perspectives. The authors will discuss collaboration and explain how the research study was carried out by investigators with complementary skills but diverse backgrounds.

Methods: The narrative review will incorporate images, examples, and documents from the authors' successful research experiences, describing processes from the beginning to the final stages of reporting and publishing data. Selected examples will include but will not be limited to the following:
• acquiring research skills
• conceptualizing and designing project and planning collaboration
• writing effective grant proposals
• hiring and working with consultants
• developing and distributing a survey instrument to capture data that assures validity and reliability
• submitting a study to an institutional review board for compliance with an institution's regulations
• choosing statistical methods and compiling and analyzing data
• presenting and publishing data (poster, flyer, reports, paper, peer-reviewed article)
• administering grant funds and managing project records
• integrating research into demanding work schedules and personal lives
• identifying challenges and overcoming obstacles illustrated by project anecdotes

Conclusions: The collaboration provided a wealth of experiences for the authors. In retrospect, the research project itself was successful, but even more importantly, the process of conceiving, implementing, and publishing a study was an invaluable experience for the investigators.

Proxy Searchers Uncovered: Research Lessons on How Ordinary Folks Seek Health Information for Others Online

Karen E. Fisher, associate professor, The Information School, University of Washington–Seattle; **Joan C. Durrance**, professor, School of Information, University of Michigan–Ann Arbor; **Jennie A. Abrahamson**, NLM fellow and PhD student, Department of Medical Informatics and Clinical Epidemiology, Oregon Health & Science University–Portland; and **Anne Turner**, MLIS student, **Phillip M. Turner**, PhD student, and **Tammara Turner**, PhD student; The Information School, University of Washington–Seattle

Objectives/Research Questions:
1. What circumstances trigger people to search for consumer health information online using www.nchealthinfo.org?

2. What barriers do people encounter in the process of searching for consumer health information online?

3. How do people use consumer health information found online, particularly that obtained via www.nchihealthinfo.org?

4. What are the characteristics of proxy searching in the domain of consumer health information?

Methods: To better understand how and why people seek online consumer health information and to what effects, we focused on www .nchealthinfo.org, a National Library of Medicine (NLM) and National Institutes of Health (NIH)-funded resource that provides such services as statewide health provider listings, MedlinePlus database access, and an "Ask a Librarian" service. The online survey ran for 21 days in February 2004. The survey's 211 respondents were initially asked to self-identify as a:

• direct user (searching primarily for themselves; n = 122)

• proxy searcher (searching primarily for someone else; n = 43)

• service provider (searching primarily as part of their job; n = 46)

Tailored surveys were deployed for each user type. Follow-up phone interviews were conducted with 10% of respondents. Our hypotheses included that proxy searchers intentionally seek information on behalf of others, primarily their strong ties, and that this searching may occur without an explicit request or follow up.

Results: We observed the strong influence of search engines on the consumer health information-seeking process, even though searchers demonstrated awareness of high-quality medical portal Websites. Health information seekers of all types needed access points to uniquely identifiable kinds of information on both broad topics and in situational contexts, including information on specific conditions, health-related programs or services, and provider information. Proxy searchers displayed different searching behavior than direct users, evaluated the barriers encountered in health information seeking differently than others, and most often embarked on searches for family members and individuals with whom they felt extremely close.

Conclusions: A better understanding of the needs of consumer health information seekers will contribute to the design and deployment of information systems and other health resources. Our research suggests that proxy searchers exhibit unique characteristics and motivations when seeking information for consumer health situations.

Veterinary Medical Libraries Section and Molecular Biology and Genomics SIG

Cloning Research Offers Challenges for Scientists and Librarians

Monday, May 16, 2:30 p.m.–4:00 p.m.

Cloning 101: A Scientist's Introduction to Cloning

Duane C. Kraemer, professor, Department of Veterinary Pharmacology, Texas A&M University–College Station

While the cloning of genes has long been of interest to the scientific world, the issues of cloning have caught the attention of the public since the first sheep was cloned in Scotland. The research and genetic work in cloning offers unique challenges for scientists, whatever the cloning project. There are possibilities for cloning specific genes related to additional genetic research, for enhancing crop quality and agricultural productivity, or for certain types of medical research. Certainly the more controversial projects have dealt with cloning animals. These projects introduce new challenges regarding ethics and the question of scientific progress. In addition, there are also legal issues involved. Cloning therefore covers many different areas of interest, touching the sciences, medicine, the law, philosophy, and morality. This presentation will give the basic background in cloning, examine projects done by the presenter and his team at the College of Veterinary Medicine, at Texas A&M University, and will also deal with the ethical and legal concerns.

Finding Good Sources for Information about Cloning

Susan Kendall, AHIP, health sciences librarian, Libraries, Michigan State University–East Lansing

Finding good and current information about the topic of cloning presents a challenge for many types of librarians because the topic ranges from scientific to ethical and legal, and interested library users may range from scientists, veterinarians, and physicians, to lawyers, philosophers, undergraduates, and the public. Furthermore, there can be some confusion when searching for information between use of the term "cloning" in the sense of cloning genes and the term "cloning" in the sense of cloning whole animals or humans. The latter is the more controversial topic of interest here. Librarians may be asked to find scientific papers for researchers, news reports, company information, ethical statements, or information relating to the passage of bills about human cloning in the US Congress or in other countries. The sources for all these types of information will vary greatly. This presentation will cover many of the good Web and print resources on this topic available for scientists and laypeople and demonstrate strategies for searching for cloning information in bibliographic databases such as MEDLINE.

Technology

2005 National Program Committee and Educational Media and Technologies Section

Changing Face of Information

Monday, May 16, 2:30 p.m.–4:00 p.m.

Improving E-book Access via a Library-developed, Full-text Federated Search Tool

Jill E. Foust, Web manager/reference librarian; **Phillip Bergen**, information architecture librarian; and **Gretchen L. Maxeiner**, cataloging librarian; Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA; and **Peter N. Pawlowski**, software engineer/lead linguist, Engineering Department, Vivísimo, Inc., Pittsburgh, PA

Objective: This paper reports on the development of a tool for searching the contents of a licensed electronic book (e-book) collection across providers at a full-text level.

Methods: Providing access to online resources is increasingly important, particularly when many users in outlying hospitals lack access to a physical library. E-book collections are especially valuable to clinical staff in these settings. Locating relevant information from a collection of 600 e-books, with different access methods, can be difficult. To facilitate use of these materials, the library has developed an innovative tool for federated searching of these online collections. Built using the Vivísimo development environment, the initial version of the tool enables a user to easily perform a full-text search of over 300 titles from the library's 5 most used e-book collections. Results are returned as a single set of links that point directly to relevant sections of the full text. Results are also grouped "on the fly" into meaningful categories that enable more precise retrieval without reformulation of the search.

Results: Future plans for this ongoing project include increasing the number of online book collections searched and developing advanced search capabilities.

Conclusions: Prerelease testing by librarians showed a high level of satisfaction. After public release user feedback will be monitored using various methods.

Exploring the Videoconferencing Wilderness: "Mixing and Matching" Video Hardware and Software for Remote Communication and Distance Education

Sharon Dennis, librarian, Multimedia Development, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: The MidContinental Region (MCR) of the National Networks of Libraries of Medicine (NN/LM) investigated various video hardware and software methods for communication with colleagues located in disparate geographical locations as well as offering distance education courses to Regional Medical Library (RML) members. By "mixing and matching" various technologies to meet particular needs, the RML was able to provide a range of opportunities for remote communication and distance education.

Methods: Hardware and software investigated by the MCR included free software packages such as the Virtual Room Videoconferencing System (VRVS), Skype for Voice over IP, and MSN Messenger as well as costlier solutions such as WebEx and Macromedia Breeze. Hardware options ranged from a $50 WebCam camera to a $500 Polycom ViaVideo camera. Both point-to-point and multi-point applications were considered; multi-point applications included a Polycom telehealth bridge and an Internet II Access Grid. Since many of the solutions are standards-based, it is possible to mix and match hardware and software to best meet the needs of the particular situation (including available bandwidth, budget, and security restrictions). Limitations, challenges, and successes of each method will be presented; VRVS and Skype software will be demonstrated.

Results: After much experimentation, the MCR has adapted several technologies for different uses: Skype for instant messaging and voice over IP conference calls with up to five participants, Breeze for offering distance learning classes to members, and the Polycom telehealth bridge for meetings that do not require application sharing. At the time of this writing, the MCR was still trying to resolve audio problems with VRVS. In the future, the MCR may make use of the Internet II Access Grid for advanced videoconferencing applications. The MCR has found that the newer models of LogiTech QuickCam work well for a low price.

Conclusions: There is not yet a "perfect" remote communications technology. Each technology offers advantages and disadvantages for different kinds of uses. The technologies have continued to improve so that they are lower cost and easier to use, but the need to bypass firewalls remains a major obstacle. The MCR will continue to mix and match technologies as appropriate to the intended use.

Capturing Clinical Competencies Using HanDBase on the Personal Digital Assistant (PDA): A Changing Role for Information Specialists

Pamela M. Corley, AHIP, research support librarian, Educational and Research Services Division, Norris Medical Library, University of Southern California–Los Angeles

Objective: Purpose: This paper will report on a program to train residents to identify, install, customize, and utilize a HanDBase applet to record their clinical activities.

Setting/Participants: The library is an academic health sciences library in a large metropolitan area. The participants were family medicine residents.

Methods: Program Description: Many medical schools and training programs have developed a set of competencies or clinical skills that students or residents are required to master. The library expanded its role and purchased the HanDBase software to pursue an opportunity to train the family medicine residents to use a HanDBase personal digital assistant (PDA) applet for logging procedures for clinical competence assessment. The author took on the role of an informationist, obtaining sample procedure logs, via beaming, to incorporate into the training.

Results: Preliminary evaluation of the training program indicated that residents were interested in learning how to operate a PDA (Palm OS) and how to use HanDBase. Some recommended including more platforms (Windows CE, Symbian OS).

Conclusions: This paper is of value to individuals and institutions interested in exploring and developing new roles for medical librarians. It describes a successful training program that was initiated from an individual consultation through the House Calls program.

Delivering Personal Digital Assistant (PDA) Information Alerts: AvantGo and Weblogs to the Rescue!

Nandita Mani, information services librarian, and **Wendy G. Wu**, information services librarian, Vera P. Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: To deliver personal digital assistant (PDA) information resources to School of Medicine students at Wayne State University. This project focuses on utilizing current technology such as Web logs and the AvantGo mobile Internet service to disseminate information so as to address the diverse information-gathering styles of this target group.

Methods: As one of the largest urban medical schools, we have a diverse student population where information gathering needs range from obtaining information through Websites, email lists, PDAs, and other information channels. The medical students at our institution are required to have a PocketPC PDA for the duration of their medical education. In this context, there is an increased demand on obtaining information on available PDA resources to enhance their educational experience. To address this need, we have utilized existing technology to create a newsletter with Web log and AvantGo channel capabilities to distribute PDA information alerts. Utilizing PDA information updates for a particular resource has been based on two criteria: (1) library licensed or (2) freely available. In addition to this information delivery service, for select PDA resources, we developed a concise guide that included download instructions, "Quick Tips" on the use of a resource and additional support materials to meet the needs of the students. This timesaving approach will provide students with up-to-date information regarding PDA resources either by using an AvantGo channel or receiving an email alert through Web log technology. In this paper, we will suggest how one can promote resources or services through the creation of information alerts using Web log technology and the AvantGo mobile Internet service and discuss future trends in information alert services.

Section Programming 2

Clinical

Hospital Libraries and Leadership and Management Sections and Clinical Librarians and Evidence-Based Health Care SIG

Stepping Out in a Clinical Way and Meanwhile Who's Covering Home Base

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

Helping Pinch Hitters Step Out While Covering Home Base

Francesca Allegri, department head, User Services; **Julia Shaw-Kokot, AHIP**, assistant department head, User Services, and coordinator, Education Services; **Kathleen A. McGraw**, assistant department head, User Services, and coordinator, Information Services; and **Karen Crowell, AHIP**, clinical information services librarian; Health Sciences Library, University of North Carolina–Chapel Hill

Objective: To develop new clinical service models for diverse hospital departments by introducing short-term intensive involvement of a clinical librarian.

Methods: A library serving a large teaching hospital collaborated successfully with one department to establish a twenty-hour-per-week librarian dedicated to, and paid for by, the department. This model does not work for all. The library wants to offer a range of services to a variety of departments and cover home base. A librarian is working with two additional departments at no charge. The librarian will (a) track how long it takes to gain understanding of the departments' needs, (b) identify desirable, measurable mutual outcomes, (c) conduct an environmental scan of hospital departments, and (d) recommend criteria for offering services to additional departments. After a short-term intensive service period, the library manager team spearheading this service will offer departments the opportunity to continue involvement with a librarian. They will establish fees for higher-end services that require additional staff.

Results: Results will be in the form of a matrix of the number of departments one librarian can serve at a specified level. Data sources will include written reports; time log and calendar; type, number, and initiation source of requests; and a list of learning activities to develop subject expertise and learn the environment and culture of the department.

Conclusions: The responses to clinical outreach by the library are varied and revealing. At the end of this exploration, the leadership of this service will have recommendations, methods, and a strategy for expanding clinical information services.

When the Medical Librarian Is Not in the Room: Using Library Evaluations, Marketing, and Champion Advocacy to Avoid Virtual Takeovers and Hospital Library Closures

Rosalind K. Lett, AHIP, president, Knowledge BasIC, InForMED, Huntsville, AL

Purpose: The professionally managed hospital library is an invaluable and irreplaceable resource for administrators, practitioners, patients, families, and the greater community. But what does the hospital librarian do that has the most impact on patient care? The purpose of this paper is to explore strategies that hospital librarians can use to avoid virtual takeover and hospital library closures.

Setting/Participants/Resources: Hospital libraries in large hospital systems and small medical centers are the sites where these survival strategies were applied. Resources used include those that support marketing, advocacy, evaluation, and valuation of hospital library services.

Brief Description: This paper reveals indicators of hospital library closures and proactive survival strategies that hospital librarians can use to demonstrate value, evaluate services, and market access to information. Hospital libraries are affected by the changes that occur in hospital finances. Most hospital librarians are not aware of the indicators that provide evidence that the hospital is in financial trouble. Knowing what actions to take to protect the library from budget cuts and transformation to a virtual library is critical. Armed with evidence of the library's value, quality indicators, benchmarking data, and library evaluation results, hospital librarians can prove the library's worth. However, having champions to advocate when the librarian is not in the room is the key to surviving and even thriving in bad times.

Results: The result was the development of a knowledge, skills, and abilities Survival (KSA) Toolkit for Hospital Librarians. This toolkit identifies essential KSA that hospital librarians must become familiar with in order to begin to counteract hospital library closures. This toolkit includes KSA that focus on: hospital financial indicators, logic models, library marketing, advocacy planning, practical program evaluation, strategic planning, fearless leadership, assertive communication, qualitative and quantitative assessment, and converting intangible services to tangible value.

Conclusions: Research supports assumptions that hospital library services are vital to decreasing medical errors and contribute to significantly lower costs, charges, and lengths of stay. This toolkit equips hospital librarians with tools to show the association between hospital costs and use of library services, while demonstrating essential knowledge, skills, and abilities.

House Calls, Information Clinics, and Inquiry: Revitalizing and Marketing Library Services to Clinicians

Sandra I. Martin, AHIP, assistant director; **Deborah H. Charbonneau**, coordinator, Information Access and Delivery; and **Ellen B. Marks**, director; Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: To present the strategies and approaches by which an academic health sciences library in a large urban health center is revitalizing and marketing library services to respond to the changing needs of diverse and dispersed clinicians and clinical researchers. A key strategic challenge is to identify evolving information needs and trends that mandate reconfiguration of existing information and educational services and the creation of more innovative models of service delivery.

Methods: A three-phase approach has been used to design a new service delivery model. First, to assess current information and educational needs, surveys were conducted to determine the most important current services. These are supplemented by interviews with clinicians, administrators, and students using the critical incident technique. Second, service redesign alternatives are assessed by a panel of highly regarded opinion leaders. Marketing approaches are developed directly based on the results of the first two phases.

Results: Results from surveys that assess satisfaction with current services and the results of critical incident technique interviews are being analyzed to present to a panel of well-regarded clinicians from across the health center. Survey results and expert opinion will be used to strengthen the infrastructure for service delivery, shape instructional programming methods, and plan additional services to meet target population needs. Marketing approaches will directly address needs to increase resonance with clinicians.

Conclusions: A subsequent survey that focuses on the weaknesses currently identified, changes in utilization, and satisfaction is planned for at three- and six-month intervals post service redesign marketing campaign.

Adopting Blogging Technologies to Support Authoring and Access to a Web-based Knowledgebase

Rikke S. Ogawa, AHIP, information services librarian; **Heidi Heilemann, AHIP**, associate director, Research and Instruction; and **Pamela Murnane**, information services librarian; Lane Medical Library and Knowledge Management Center; and **Phil Constantinou**, director, Systems Development; **Charles Yates**, programmer, Digital Information Systems; and **Fletcher Cocquyt**, system software developer; Information Resources and Technology Development; Stanford University Medical Center, Stanford, CA

Objective: To improve access to information for library clientele and staff via a searchable, indexed knowledgebase of frequently asked questions, which allows broad distribution and repurposing of centralized postings of announcements, policies, and information about services.

Methods: Lane Medical Library and Knowledge Management Center serves Stanford University School of Medicine, two teaching hospitals, and remote faculty at affiliated hospitals and clinics. Within the last year, the library has changed infrastructure and services dramatically, creating the need for a central repository of frequently asked questions on services and policies. The library employed the Moveable Type Publishing Platform to create a Web log that expedites Web posting, includes librarian-assigned indexing, centralizes editing capabilities, produces RSS feeds to distribute a single posting in multiple locations, simplifies news posting, and a search interface for easy access. This ongoing project will expand to include an internal knowledgebase of library policies and procedures. By analyzing search queries and Web usage statistics, we will evaluate the utility of Web logging technology in making information easily available at the point of use.

Results: Full participation from library contributors was facilitated by the ease of use of the product, requiring only minimal training and support for adding content while eliminating previous technical barriers to Web development. Full participation also tripled the number of regular Web content contributors which in turn led to more efficient and timely updating of Web pages. Library staff also used the knowledge base to reinforce in-house training and service efforts. Data demonstrates an increase in access to our FAQ content and has also provided us with information about new content areas to pursue.

Conclusions: There is a place for blogging technology in libraries. For a myriad of reasons including: ease of use, distributing workload, and more timely updates, the FAQ-Knowledge Base has proved a valuable tool in training our internal and external clientele. It has also significantly reduced the bottleneck of content management.

Research and Nursing and Allied Health Resources Sections and African-American Medical Librarians Alliance and Clinical Librarians and Evidence-Based Health Care SIGs

Practicing Evidence-based Health Care

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

Envisioning the Informationist/Information Specialist in Context (ISIC): Differences in Health Care and Library Professionals' Perceptions of the ISIC Role

Nila A. Sathe, associate director; **Rebecca N. Jerome**, NLM informatics fellow; **Mason B. Currey**, health information analyst II; and **Nunzia B. Giuse, AHIP**, director and professor, Biomedical Informatics, Department of Biomedical Informatics; Eskind Biomedical Library, Vanderbilt University Medical Center, Nashville, TN

Objective: To describe perceptions of the education and skills needed by informationists/information specialists in context (ISICs) and barriers to ISICs' acceptance and to compare the views of library versus health care/research professionals (HRP). The ISIC describes a health information professional with both in-depth knowledge in a health care/research domain and highly developed information-seeking and appraisal skills.

Setting/Subjects: Library and HRPs responding to an exploratory survey on the ISIC concept.

Methods: Exploratory, Web-based survey study using ranking and open-ended questions. Surveys employed detailed scenarios of ISICs in practice in clinical, bioresearch, and public health settings as well as acting as clinical education consultants and managing research projects; respondents ranked the priority of skills necessary for ISICs. Skills were determined from preliminary focus groups of library, health care/research, and informatics professionals; surveys also allowed respondents to contribute additional skills. Surveys also queried respondents about educational needs for ISICs and addressed perceived barriers to ISIC acceptance as well as administrative issues such as salaries and liability concerns. Investigators promoted the survey through library-focused mailing lists and publications and solicited health care/research input via postal mailings.

Results: The volume of librarian responses far exceeded that of HRP (274 vs.39). Both groups typically ranked the priority of all potential ISIC skills in each scenario highly, though visioning and political/negotiation skills were generally ranked lower. Neither group expressed strong opinions about HRP's likelihood (scale: 1 not likely to 5 highly likely) to assume ISIC roles (librarian mean 2.8 vs. 3.3 HRP) or widespread ISIC implementation (librarian mean 3.0 vs. 3.1 HRP). Both groups noted appropriate compensation and recognition as likely to raise interest in the role. Librarians stressed the need to position ISICs as equal team members rather than ancillaries.

Conclusions: This exploratory survey indicates an incipient understanding of ISICs and need for clearer definition. HRP respondents generally accepted ISICs but require more proof-of-concept before fully embracing the idea. Many librarians indicated difficulty separating the role from medical librarianship. Delineating ISIC practice differences, training pathways, and expected duties is critical to diffusion.

Introducing Literature-based Evidence into Institutional Patient Care Protocols

Annette M. Williams, associate director, Operations, Eskind Biomedical Library, Vanderbilt University Medical Center, Nashville, TN; **Garad Megan Davis**, librarian, Stewart Library, Weber State University, Ogden, UT; and **Shannon Mueller**, librarian; **Marcia Epelbaum**, assistant director; and **Nunzia B. Giuse, AHIP**, director and professor, Biomedical Informatics, Department of Biomedical Informatics; Eskind Biomedical Library, Vanderbilt University Medical Center, Nashville, TN

Objective: To support medical center leadership's desire and mandate to integrate evidence-based medicine (EBM) principals and practices into all clinical interactions, the library developed a Web-based knowledge management tool that links relevant supporting literature from five online EBM resources, PubMed, UpToDate, CINAHL, Healthgate, and EBM Reviews, to the institution's clinical care pathways topics for just-in-time access to the latest evidence.

Methods: As the repository of evidence and of skilled information experts, the library is well-positioned to proactively promote use of EBM principals across the medical center. Library information specialists are integrated members of multidisciplinary clinical teams, and one of their contributions is the development of the Pathway Literature Locator (PLL) database providing evidence supporting the creation and revision of locally implemented inpatient care pathways. A pathway defines the clinical goals, treatments and procedures, lab tests, drugs, diet, nursing assessments, and consultations for treating specific conditions. Lever-

aging on the expertise gained through participation in clinical rounding, librarians apply their subject knowledgebase to analyze and organize pathway topics into salient facets. The PLL online tool imbeds expertly created literature-based search strategies targeted to the specific facets of each pathway. Librarians enrich pathways with links to patient education resources and relevant authoritative Website links.

Results: The PLL currently provides evidence-based literature support for approximately 76% of the medical center's electronically available pathway documents. EBL has also responded to requests for additional literature support from several care teams utilizing existing PLL topics. Library information specialists link fully summarized review packets to the pathway literature and incorporate additional search facets as needed. In synergy with the EBL's philosophies of proactive information provision and integration of library expertise into informatics tools, the PLL is available to the entire medical center, and all content is indexed using ICD9 and Current Procedural Terminology (CPT) standard coding to enable systematic linking to other applications.

Conclusions: PLL use statistics, generated weekly, enable EBL to monitor access and proactively identify clinical pathways currently undergoing revision, which may necessitate additional expert assistance. Anecdotal evaluation and feedback from clinical teams has been positive, and the library is increasingly fielding complex evidence requests generated as teams examine PLL literature.

How to Create an Instant, Evidence-based Comparison of Treatment Effectiveness and Safety for Diverse Patient Populations

Ofer A. Avital, director, Management, Evidence Matters, Montreal, QC, Canada

Objective/Purpose: To provide evidence-based care, clinicians, and librarians need help managing the flood of new research. As an alternative to using pre synthesized reviews, this new technology allows a user to create an instant meta-graph or table that synthesizes the literature to answer a particular question. With one click, a user can compare therapies by thousands of different safety and efficacy-based outcomes.

Methods/Description: This is a new, user-friendly clinical/library information system that answers questions on therapeutics in an evidence-based manner. It is an online database of indexed results from thousands of peer-reviewed clinical trials. With the structured and user-friendly "ask-a-question" interface, a user can synthesize relevant trial results into custom graphs or tables to visually compare treatment outcomes. Results are organized by strength of research design, with filters for patient age, sex, nationality, and disease stage. Links are available to multilingual, bullet-point structured summaries of every article. The entire system self-updates daily, with up to ten new trials added per day. It was designed by physicians, medical librarians, and epidemiologists from academic centres in Canada and the United States. It presently contains over 50,000 statistics in cancer and cardiology and will expand coverage based on user demand.

Weaving Evidence-based Medicine Resources into the Internal Medicine Residency Morning Report

Cindy A. Gruwell, associate librarian, and **James Beattie Jr.**, associate librarian, Bio-Medical Library; and **Bradley Benson**, assistant professor, Pediatrics, Department of Medicine; University of Minnesota–Minneapolis

Objective: To enhance evidence-based learning experience and information discovery skills of internal medicine residents participating in the Monday morning report.

Methods: In the fall of October of 2003 two librarians, the associate director of medicine/pediatrics residency program, and two chief residents embarked on a collaborative effort to introduce and employ EBM resources via "real-time" searching during the Department of Medicine's weekly morning report conference. Each week, the librarians search the topic of the day, taking into account the types of information needed and questions posed during the session. Taking advantage of an informal atmosphere, we access numerous resources with the clinical experience of the programs' associate director to further explore, pose questions, and clarify aspects of the disease state being presented. Using MEDLINE as the "core" resource, we work diligently to include other resources both subscription-based and those freely available on the Internet to explore various aspects of "evidence" during the morning report. These include MICROMEDEX, Stat!Ref, UpToDate, imagesMD, MDConsult, and others. After each session, the presentations of the chief residents and librarians are fused into one PowerPoint-driven recap and mounted on the Web using Macromedia Breeze.

Results: Feedback from residents, medical students, and various members of the faculty has been very positive. Residents state that they have a better understanding of how to access and utilize many of the tools that we use during their presentations. In addition, the residency program is able utilize this collaboration to meet new standards of the Accreditation Council for Graduate Medical Education (AGCME), set forth in 1999.

Conclusions: The collaboration between members of the Bio-Medical Library and the Internal Medicine Residency Program has been instrumental in skill building both for the residents and the librarians. The residents are learning about the varied resources available from the library and other EBM centric entities, the librarians in turn, have a much clearer picture of the information challenges and needs of residents, faculty, and physicians in the clinical setting.

Diversity

Collection Development, Chiropractic Libraries, and Dental Sections and Complementary and Alternative Medicine and Lesbian, Gay, Bisexual, and Transgendered Health Sciences Librarians SIGs

Diversity in Collection Development

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

Finding and Evaluating Complementary and Alternative Medicine Resources for Your Collection

Susan Murray, AHIP, manager, Consumer Health Information Service, Canadian Health Network, and project manager, Complementary and Alternative Health, Toronto Reference Library, Toronto, ON, Canada

Objective: To provide strategies for locating and evaluating resources in the area of complementary and alternative medicine (CAM).

Methods: A scan of the literature and Internet searches were conducted for information on how to evaluate CAM resources and finding aids for CAM resources. Librarians in several CAM institutions were also consulted.

Results: Librarians in a variety of settings will have key starting points to identify high-quality CAM resources for collection development.

Conclusions: Librarians will have greater confidence in selecting CAM resources for their collections.

Are They Really Worth It? Preliminary Evaluation of Classic Dental Citations in Terms of the Hierarchy of Evidence, 1980–2003

Ann Marie Corry, librarian, and **Karen B. Williams**, director, Clinical and Applied Research, School of Dentistry, University of Missouri–Kansas City

Problem Statement: The literature of virtually every discipline is replete with "classic" articles. Students and graduate students are required to read and internalize these heavily cited articles. But, in the light of the push toward evidence-based research, are these articles truly valuable in terms of the hierarchy of evidence?

Materials and Methods: As part of a larger study of dental citations, an analysis of dental cited works was undertaken. The data set and analytical software was obtained from ISI Thomson for the time period 1980–2003. First, data on type of article was compiled in five-year increments. Secondly, the level of evidence was surveyed using information from the titles of articles. These data will also be compiled in five-year increments. Finally, the most heavily cited articles were identified for the period 1980–2003 both as source and as cited articles. These specific articles will be analyzed in terms of the six-point hierarchy of evidence by checking the Medical Subject Headings (MeSH) and by reviewing the articles. Analysis will determine the average level of evidence as represented by these highly cited articles in the dental.

Results: The results of this study will be presented along with suggestions for future analyses on specific disciplines of dentistry and that the twenty-five most heavily cited articles were either case reports or reviews rather than randomized controlled trials or meta-analyses.

Conclusions: The results of this preliminary study indicate that while overall the heaviest cited articles are papers or proceedings papers and/or randomized controlled trials, the "classic" heavily cited articles are generally case studies or reviews. Future analyses are planned to compare heavily cited articles in five-year increments to determine if current literature also cites those articles with a higher evidence-based rating than the older literature.

Collection Development Strategies for Health Care of Lesbian, Gay, Bisexual, and Transgendered People

Paul Blobaum, librarian, University Library, Governors State University, University Park, IL

Objective: This session will discuss the consideration of the information needs of lesbian, gay, bisexual, and transgendered people and the health care professionals who care for them as a pathway to building an overall collection that serves the needs of the whole community.

Methods: In an era of downsized, less than magnificent budgets and increased focus on online materials, it is a challenge to purchase materials needed for a basic print collection, much less the needs of (perceived) specialized interest groups. Health sciences librarians look beyond such short sighted assessments to strategize and plan how to address the needs of diverse communities they serve with quality resources. Ranganathan's immortal laws of librarianship celebrate a broader vision which includes recognizing lesbian, gay, bisexual, and transgendered people. A short case study of the Governors State University Library's collection development strategy, selection methods, and assessment of results will be presented with the goal of securing an even more diverse, even more magnificent future.

Fronteras Nuevas: The Implications of Bioterrorism Literature for Libraries and the Scientific Community

Jill D. Sherman, head, Technical Services, and **Elizabeth M. Smigielski**, coordinator, Library Marketing, Kornhauser Health Sciences Library, University of Louisville, Louisville, KY

Objective: This paper will examine the practical and ethical challenges involved in selecting, acquiring, and managing a bioterrorism special collection—developed as a component of an academic health sciences center library collection—as well as the broader implications regarding restrictions on, and possible self-censorship of, scientific information in light of national security concerns.

Methods: A portion of federal grant monies awarded to create a Center for the Deterrence of Bio-warfare and Bio-terrorism was dedicated to establishing and building a comprehensive special collection on bioterrorism as part of a larger academic library collection. Collecting

these materials presents a special challenge because these materials are largely comprised of gray literature containing "sensitive" information, information that may be removed from public access in order to avoid national security risks. Managing such a collection raises serious questions for librarians who seek to balance freedom-of-information and the restriction of access to potentially dangerous information. In addition to the concerns of libraries and librarians, the scientific community as a whole and publishers of scientific materials wrestle to balance scientific advancement, the open dissemination of scientific information, and the responsibilities involved in protecting the welfare and security of the populace.

Strategies for Creating and Transforming Collection Management

Marian Hicks, director, Learning Resource Center, Cleveland Chiropractic College, Los Angeles, CA

Objective: Complementary and alternative medicine (CAM) is one of the fastest growing sectors of the nation's health care industry and now accounts for $20 to $30 billion per year in consumer expenditures. Chiropractic is the largest of the CAM professions and accounts for approximately $8 billion per year in overall health care expenditures. Today, chiropractic is growing rapidly and becoming an integrated part of the national health care system. Many allopathic physicians, especially the younger ones, view chiropractic care as effective for certain conditions and readily refers patients to chiropractors. If you aspire to manage information and people, this presentation will give you something to think about.

Setting: Because of this increased interest in chiropractic, the overall objective is to provide authoritative information on collection development trends and emerging patterns in library settings.

Methodology: This presentation will identify current trends and emerging patterns as they impact academic settings. It will focus on library strategies for active participation in the collection and dissemination of data, which are in demand. The focus is to present a comprehensive view of in-depth collecting priorities and its effect on the entire community.

Results: The outcome will provide a systematic, planned presentation in an effort to provide users with what they need and want. This will serve as a benchmark for future inquiries in collection development.

Pharmacy and Drug Information and Medical Informatics Sections and Molecular Biology and Genomics SIG

Medical Informatics and Bioinformatics: Serving Diverse Information Needs for Clinical Practice and Research

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

Integration of Knowledge-based Patient Education Resources into an Electronic Medical Record System

Eileen H. Stanley, AHIP, director, Library Services and AV/Conference Technologies, Allina Hospitals & Clinics, Minneapolis, MN

Objective: A multifunctional team set out to select a current, authoritative, enterprise-wide source for patient education and information handouts to be integrated into a new electronic medical record system. The team needed to consider both internal and commercial options, support the technical integration and interface design and implement the solution in 2004.

Methods: Allina Hospitals & Clinics, a large multisite health system headquartered in Minneapolis, MN, assembled teams of analysts, de-

signers, and builders to create one common electronic medical record with inpatient, outpatient, and revenue subsystems. Planning began in 2003 with the first implementation in 2004. The patient education component was identified by several project teams' members as needing non-project decision making and support. At their request, an adjunct team was formed with representatives from the library unit, communications, patient care units, the clinical documentation team, and the marketing unit. This team performed an assessment of environment, evaluation of available inhouse and commercial options, facilitated development of technical build steps using preferred data access and delivery mechanisms, dealt with change in the interface at time of implementation, and established policies and processes for adding other knowledge-based resource components to the electronic medical record system during the five-year implementation schedule.

Results: Excellian, the name given to Allina's electronic medical record system based on Epic systems, now includes links and ties to Micromedex Care Notes, AfterCare Instructions, and Drug Notes. Allina Press patient education and instruction documents are also used when available. An ongoing Clinical Decision Support team will monitor and lead future efforts to select, manage, and integrate knowledge-based content with Excellian. Knowledge Consultants from Allina Library Services will continue to have a role on the Clinical Decision Support team.

Conclusions: This multidisciplinary approach using library staff expertise, clinical representatives, and communications specialists allowed for a consensus decision to be achieved and adopted. The development work was pursued concurrently allowing both groups to meet aggressive implementation schedules.

Stanford Metasearch: Smart Searching for Clinicians

Debra S. Ketchell, AHIP, associate dean, Knowledge Management, and **Charles Yates**, knowledge management applications developer, Lane Medical Library and Knowledge Management Center; **Philip S. Constantinou**, director, Systems Development, Information Resources and Technology Systems Development; **Pamela M. Murnane**, Web content coordinator, Lane Medical Library and Knowledge Management Center; and **Jason B. Axtell**, system software developer, Information Resources and Technology Systems Development; Stanford University, Stanford, CA; and **Kevin S. Clarke**, digital projects programmer, Princeton University Libraries, Princeton University, Princeton, NJ

Objective: To expand use of clinical reference at the point of care by clinicians by creating a heterogeneous search across multiple licensed, free, and local content sources with a fast, simple interface.

Setting: The Lane Medical Library and Knowledge Management Center serves an adult and children's hospital and their affiliated clinics at the Stanford University Medical Center. The clinician population is comprised of students, residents, clinical faculty, nurses, and other allied health staff. The library licenses several clinical reference packages and provides metadata to local and freely accessible content.

Methods: A search portal to simultaneously query these multiple reference sources and return a results list in five seconds using multi-threaded searches and caching was developed. Search terms are passed through a spell checker. Search negotiators interact with each remote source and retrieve results in various formats (e.g., XML document, screen scrapes). Results are filtered and presented in a categorized and prioritized list. The system tracks usage including search terms, sources used, and location of user.

Results: The Clinical Core MetaSearch was deployed in September 2004. Over 100 clinical reference sources are searched, including content in SKOLARMD, UpToDate, MDConsult, Harrison's, Micromedex, MedlinePlus, PubMed, images.MD, OMIM, AAP Red Book, and clinical calculators. A filtered subset of 24 sources for pediatricians was deployed in November 2004.

Conclusions: This project demonstrates the feasibility of a production metasearch that maximizes the use of heterogeneous clinical reference sources. Standardization of Web services across vendors that provides results extraction is needed to integrate clinical reference in context and into the electronic health record.

Reach, Stretch, and Grasp: Establishing a Library Liaison Program for Computational Biologists

Kevin R. Messner, assistant science librarian, Bio-Medical, Veterinary Medical, and Magrath Libraries, University of Minnesota–Minneapolis

Objective: This paper will report on the development and evaluation of a computational biology/bioinformatics liaison and instruction program in a large academic library system, serving a comprehensive research university with a variety of research and instructional programs in the subject area.

Methods: The program includes several components: (1) a series of libraries-sponsored workshops on bioinformatics resources; (2) course-integrated instruction on bioinformatics and other information resources of interest to bioinformatics researchers and students; (3) participation in journal clubs, seminars, symposia, and other activities with relevant user groups; and (4) a blog-style Website aimed at user groups in the molecular biosciences and computational biology. Opportunities for collaboration in instruction and service offerings are being explored with other established computational biology units on campus, focusing efforts on identifying niches for the library, within the larger range of service offerings from other university units. Evaluation methods include: (1) demand for workshops, lectures, and reference consultations pertaining to bioinformatics resources; (2) use of the Website, via a Web counter, and subscriptions to the update notification feature; and (3) anecdotal comments from library users.

Information Needs of Biologists for Online Bioinformatics Resources: Implications for Health Sciences Information Professionals

Dihui Lu, PhD student, and **Gary Marchionini**, professor, School of Information and Library Science, University of North Carolina–Chapel Hill

Objective: The objective was to understand the information-seeking behavior of biologists with online bioinformatics resources for genome-related research.

Methods: A Web-based survey was designed to assess how biologists access and use online bioinformatics resources. The invitation of the survey was sent to 350 biologists from academia, industry, and government research organizations. A total of 57 complete feedbacks were analyzed to generate a information use profile for biologists working on functional analysis of genome (38), general molecular biology (10), and genome bioinformatics (9).

Results: The survey showed that the majority of biologists believe that online bioinformatics resources play very important roles for their research and have positive attitudes toward future bioinformatics usage and training. Most of the respondents (90%) access online bioinformatics resources on a daily or weekly basis. They learned about the online bioinformatics resources from the Web (30%), experienced colleagues (29%) and literature (21%). They primary access online bioinformatics resources by Web interface (66%) and email (13%). Due to the rapid changing information environment, many biologists still have difficulty in keeping up to date with the information resources and making queries against multiple resources.

Conclusions: This study revealed the information challenges that biologists are facing in using online bioinformatics resources. Results of this research also underscore the importance of bioinformatics training that can be provided by health sciences librarians and information professionals.

Education and Outreach

Consumer and Patient Health Information and Corporate Information Services Sections and Lesbian, Gay, Bisexual, and Transgendered Health Sciences Librarians and Mental Health SIGs

Challenging Patrons, Challenging Questions: Case Scenarios to Enlighten Our Futuro Magnífico

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

Bigotry or Research? A Librarian and the Literature Search to "Cure" Homosexuality

Michael Scott, manager, Library Services, Library, Fairview University Medical Center, Minneapolis, MN

Objective: What happens when a librarian (gay or not gay) is asked to do a literature search about changing someone's sexual orientation or "curing" homosexuality?

Methods: Using a skit and/or scenario, a gay/not gay librarian is asked to do a literature review on changing or curing some who is gay, lesbian, bisexual, or transgendered. The person playing librarian will accept the request, then walk the audience through the feelings he/she has toward this request. This is based on the author's real-life experience.

Challenging Patrons, Challenging Questions: Case Scenarios to Enlighten Our Futuro Magnífico

Joseph Kobos, professor, Department of Psychiatry, and director, Counseling Service, The University of Texas Health Science Center–San Antonio

Purpose: Librarians will act out reference interactions with difficult patrons or questions that are emotionally challenging with insights given by counseling professions on handling the situation.

Setting/Participants/Resources: Librarians in all types of libraries handle the emotionally distracted, mentally ill, or angry patron or questions that are emotionally challenging for them. Providing reference services in these situations are challenging and will be explored.

Brief Description: While the reference interview and the ethics of providing reference services in a difficult situation have been explored, there has been little attention given to the emotional aspects of reference services. Many librarians find dealing with angry, very emotional, or mentally ill patients difficult. Other reference questions can pose a moral dilemma for the librarian. Training seldom prepares us for handling these challenging situations. Librarians will act out these situations with reactions provided by mental health counselors.

Results/Outcome: Librarians need to become more adept at handling both the emotions of their more challenging users and at understanding their own reactions to offensive questions. Techniques such as setting limits, maintaining calmness, and projecting a caring attitude can be helpful.

Hospital Libraries and Leadership and Management Sections

Celebrate Me Home

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

The Role of the Librarian as Clinical Transformation Leader

Linda Hogan, director, Medical Informatics, Information Services Division, Pittsburgh Mercy Health System, Pittsburgh, PA

Objectives: Define clinical transformation; identify how previous opportunities (Woods Hole, NLM, CBMI) led to one librarian becoming the clinical transformation leader for a large health care system; discuss results from a current case study in clinical transformation; recognize the role of knowledge-based information (cultural value of clinical transformation); and identify how the library's mission expanded, resulting in new opportunities for other librarians.

Methods: Clinical transformation identifies innovative programs and technologies that enable organizations to achieve safe, quality, and cost-effective patient outcomes. By definition, a clinical transformation program must contribute to both improved clinical outcomes and have a sustainable, measurable benefits realization. Extrapolation data is tracked across the lifespan of the project, along with "lessons learned." In 2003, one of the largest health care systems in the United States launched a five-year clinical transformation initiative, led by one of its librarians. Some projects relied heavily on technical innovation (e.g., CPOE). Other projects changed the delivery of patient care. In many projects, the achievable outcome was a reduction in medication errors. This knowledge is actively disseminated so all hospitals benefit from the collective experiences of others. There are two truths, which determine our success. No matter how much we want to increase the quality of care or reduce errors, it is often the financial aspects of these projects that allow the investments to be made for them. Second, clinical innovations seldom gain acceptance, unless providers observe others like themselves gaining significant benefits. Clinical transformation positions hospitals to make informed decisions regarding their own clinical practice innovation and clinical technology implementation. Librarians can contribute to or even lead this process. One librarian used the opportunities available through Woods Hole, NLM and the CBMI to better position herself to lead these efforts for an entire health care system, while still maintaining responsibility for the staff and services of the health systems' libraries and hospital archives. Combining our expertise means new opportunities await those who know that there is nothing enlightened about shrinking from the challenge of a rapidly changing health care environment.

Celebrating a New Home for Health Sciences Education with New Technology for Teaching

Jeanne M. Le Ber, education services librarian, and **Nancy T. Lombardo**, systems librarian, Spenser S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: This paper will:
• describe the process of planning and implementing a new teaching technology in a new interdisciplinary health sciences education building
• outline the course of action taken by librarians to develop tablet PC skills
• discuss the implementation of the tablet PC short course that resulted from sharing sessions with a selected group of faculty
• highlight innovative uses of a tablet PC for instruction

Methods: This health sciences library took a leadership role in preparing faculty to teach in a new state-of-the-art, student-focused, interdisciplinary education building that integrates the most recent advances in technology to improve teaching and information dissemination. Tablet PCs were identified as a potential tool for instruction. Initially, librarians met weekly to educate themselves and become comfortable with this tool. Later, librarians invited faculty to explore uses of the tablet PC for teaching. Monthly meetings allowed the exchange of ideas and helped identify the most useful features. A pilot group of faculty were selected and helped us identify the most valuable instruction features of the device. Faculty feedback was used to develop a relevant hands-on training program.

Results: To prepare faculty for teaching in the new building, a classroom simulating those in the new facility was installed in the library and used to deliver tablet PC training. After taking the self-paced tutorials, faculty attended a one-hour hands-on class covering the basic features of the tablet PC including the device geography, pen calibra-

tion, screen orientation and input panel. Journaling and annotation were the primary focus of the instruction. A follow up class covering the use of the speech tools and publishing to the Web was available for those wanting to go beyond the basic features. Individual consultations were available on request.

Conclusions: Health sciences faculty gained skills and developed expertise with the tablet PC and are better prepared to teach in the new interdisciplinary facility. Librarians provided leadership by identifying innovative technologies and bringing faculty together to learn them. Through the process, librarians gained value expertise to better serve health sciences faculty.

From the Shore to the Screen: Translating Informatics Training into a Distance Education Course

Douglas L. Varner, AHIP, informationist fellow, William H. Welch Medical Library, Johns Hopkins University School of Medicine, Baltimore, MD

Objective: This presentation will describe a distance-education-based nursing informatics course, developed and implemented following the instructor's participation as a fellow in the Medical Informatics Course taught at the Marine Biological Laboratory in Woods Hole, MA. The presentation will include discussion of instructional methodologies; course content development and translation into a distributed, virtual learning interface; and the challenges encountered in interfacing with students and achieving "teachable moments" in an online, distance education environment.

Methods: The course was developed for a master of sciences in nursing online degree program taught using the Blackboard template and functionality to deliver a distance education course.

Agents of Change: Participation in the National Library of Medicine/Marine Biology Laboratory (NLM/MBL) Medical Informatics Course (Panel Discussion; 30-45 Minutes)

Anne M. Linton, AHIP, director, and **Laura E. Abate**, electronic resources and instructional librarian, Himmelfarb Health Sciences Library, The George Washington University, Washington, DC

Objective: For more than ten years, librarians have participated in the National Library of Medicine/Marine Biology Laboratory (NLM/MBL) medical informatics course. A panel of graduates will discuss their reasons and goals for attending the course, their immediate evaluation of the course, and the long-term impact of the course on their understanding of the subject matter and career.

Methods: The panel will include course participants from different years, diverse professional responsibilities, and varied career points. Members of the panel will individually address questions regarding the course including (1) What led you to the course?; (2) Thinking back, what aspect of the course had the greatest immediate impact on your career?; (3) At this point, x years since taking the course, what has been the greatest lasting impact from the course?; (4) How do you use the knowledge or experience of the course in your current role?; and (5) What advice would you give to librarians interested in pursuing admission to the course? An open discussion at the end of the session will permit the audience to elicit further information from the panel, pursue additional questions, and begin to translate the experiences of the panel to their specific situations.

Results: Attendees of this session hear a panel of four librarians who have participated in the NLM/MBL informatics course review its impact on their careers. Panelists represent both recent attendees and earlier alumni of the program. Two panelists have attended other leadership programs such as the Frye Leadership Institute for leaders in higher education interested in transforming information services. They discuss the career impact of the NLM/MBL program in the context of these broader programs. Both panel moderators are alumni of the

NLM/MBL program and heavily involved in medical informatics instruction on the medical school level.

Conclusions: Most participants in the NLM/MBL informatics program have found it to be rewarding. Yet each participant takes home a unique set of skills and experiences. This panel discussion of how participants apply this set of skills and knowledge in their own institutions and along unique career paths provides valuable insights to individuals interested in providing technological leadership in health sciences librarianship.

Research

Dental, Consumer and Patient Health Information, Hospital Libraries, Leadership and Management, Public Health/Health Administration, and Research Sections and Assessment and Benchmarking SIG

Establishing Best Practice

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

On Being a Software Development Client: Borrowing Best Practices from Software Engineering

Julie K. Kwan, AHIP, library network coordinator, Pacific Southwest Regional Medical Library, UCLA Biomedical Library, Los Angeles, CA

Objective: Many software development projects fail due to improper process and expectations. This paper will report on a series of best practices in software engineering that librarians will find helpful for the development of new software. The goal of this paper is to improve the ultimate products developed as librarians work with software engineers and other developers.

Methods: From 1997 through 2003, the author collaborated with researchers from the University of Southern California's Center for Software Engineering and served on the client side of the software development process. This research was conducted during the course of the academic year using graduate students enrolled in a year-long software engineering program.

Results: Librarians benefit from a better understanding of best practices in software engineering, including: understanding of the spiral software development process, requirements definition and negotiation, win-win approaches to issues resolution, and independent testing and evaluation.

Conclusions: Understanding best practices in software engineering helps the librarian make an appropriate selection of a software developer; estimate, early on, if there are serious risks that might affect the success of the project; and determine how to best contribute to the process.

The MLA Benchmarking Network: The Significance of the Aggregate Data

Rosalind F. Dudden, AHIP, FMLA, health science librarian, Tucker Medical Library, National Jewish Medical and Research Center, Denver, CO, and **Michelle M. Volesko Brewer**, director, Library and Corporate Information Services, New Jersey Hospital Association– Princeton

Objective: This report seeks to illustrate the utility of the MLA Benchmarking Network aggregate statistics for all nonacademic health sciences libraries.

Methods: The MLA Benchmarking Network, in development since 1996 with survey data gathered via Web intake forms in 2002 and 2004, has produced significant quantitative data about the operations

of over 300 nonacademic health sciences libraries. Three hundred and forty-four hospital libraries were reported in 2002. In 2004, 316 hospitals were reported as well as 57 other libraries for a total of 373. These surveys represent a 16% and 15% sample of the possible 2,167 hospital libraries reported in Wakeley (Bull Med Libr Assoc 1993 Apr;81(2):123–8). The data were analyzed and parts chosen for a description of their significance to library management.

Results: The authors will report aggregated data from the 2 surveys and make comparisons for hospital libraries. Data from association libraries and libraries in research institutes will also be reported for 2004. Several states will be chosen for comparisons. Some examples of the data to be reported might be that of the 283 hospitals and hospital systems that reported library FTE and hospital FTE, the ratio of employees to librarians is one library staff member to every 768 hospital employees, which compares favorably with the number of 700 published in the *Standards for Hospital Libraries* (J Med Libr Assoc 2002 Oct;90(4):465–72). The total number of patients served by these 283 hospitals with libraries is more than 5.7 million admissions and more than 77 million outpatient visits. The librarians answered over 689,000 reference questions, 168,000 of them for consumers. They performed over 180,000 mediated searches.

Conclusions: The availability of national data on the operations of nonacademic libraries will have significance in planning and management of these libraries as well as quantifying a national library database for purposes of advocacy and promotion of the profession and the association.

LibQual+ 2004: A Hospital Library Cohort's Results

Eileen H. Stanley, AHIP, director, and **Betsy P. Moore**, senior knowledge consultant, Library Services and AV/Conference Technologies, Allina Hospitals & Clinics, Minneapolis, MN

Objective: To determine the applicability of the LibQual+ survey to hospital library settings by participating in the 2004 survey. LibQual+ is a Web-based library service, quality-evaluation tool adapted from ServQual, which is used in the service industry.

Methods: A self-selected group of hospital librarians who participated in the 2001 MLA benchmarking survey volunteered to be part of a pilot cohort in the 2004 LibQual+ Web-based survey. Participation was partially sponsored by MLA and NLM. They met in 2003 to organize and prepare for the survey. Preparations included joint selection of unique survey questions for the group, demographic questions for the population, and site-specific methods for sampling or surveying. Each library determined the need for local internal review board (IRB) approval in advance of the survey. The survey was conducted at each site during the open survey period in the spring of 2004. All surveys were completed by May 31, 2004, and results were processed and delivered to the members for their individual sites and the cohort as a group. The group reviewed the results, discussed and evaluated the entire process, and submitted a report to the sponsoring organizations.

Results: The Hospital Library Cohort of the 2004 LibQual+ survey consisted of seven hospital or health system library participants. A total of 1,024 responses were received. The distribution was 42% doctors, 25% nurses, 11% allied health, 16% nonclinical staff, and 6% other. Highest positive service scores were seen for affect of service (such as employees who instill confidence in users). Lowest negative scores were seen for information control (such as making electronic resources accessible from home or office). Highest positive scores were seen among physicians, lowest negative scores among nurses.

Conclusions: The survey was a valuable experience for the participating libraries for both the individual and cohort results. Managing the survey was easy and the turnaround time on results exemplary. The length of the survey for the respondents and the market cost to participate are barriers to extending to other hospital libraries. Alternating this type of quality survey with a benchmarking survey developed by MLA was suggested as a way to make it affordable and manageable.

The Resource Management Model of Integrated Collection Services

Deborah Silverman, associate director, Resource Management, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: Changes in library use patterns in the last decade have led libraries to reexamine staffing patterns supporting technical services and circulation. This paper presents a case study of one library's integration of technical services and circulation functions and staff into a coordinated resource management and collection services structure.

Methods: As shrinking gate counts and declines in print resource use have eased circulation workload, digital resources and enhanced integrated library systems (ILS) capabilities have increased technical services demands beyond existing staff resources. In 1998 the library formed the Resource Management Area by combining the disparate circulation units and technical services unit under a single management structure. Oversight is functional, with managers' responsibilities defined by the processes they oversee, regardless of individual staff reporting lines. The evolution of Resource Management into a unified work unit has offered opportunities for increased efficiency and organizational agility, while offering new possibilities for staff development and innovative user services supporting collections. The unified approach has allowed for a broad perspective of collection services to support solid decision making at all levels, from on-the-spot problem solving at the circulation desk to long-term planning for collection and metadata policies.

Research, Consumer and Patient Health Information, and Hospital Libraries Sections and Assessment and Benchmarking SIG

Research Methodology 101 (Part II): Yes, You Can Do Research!

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

Finding Your Niche: Opportunities for Research and Publication for All

Joanne Gard Marshall, AHIP, FMLA, professor, School of Information and Library Science, University of North Carolina–Chapel Hill

This presentation will be concerning the Institute of Museum and Library services, from which I have two grants at the moment. Additionally, I will emphasize the importance of team work and partnerships in research and publishing.

Evidence-based Librarianship Underpinning Cochrane Reviews: A Case Study of the Role of Information Retrieval Research in Evidence-based Health Care

Carol Lefebvre, information specialist, UK Cochrane Center, Oxford, United Kingdom

Evidence-based librarianship and information retrieval can be defined as the application of evidence to the practice of librarianship or information retrieval. Decisions that could and should be evidence-based include which databases to search, which search terms to include in search strategies, and whether to search the "gray literature." Examples will be given of evidence-based information retrieval in the Cochrane setting.

Writing a Successful Grant: The Reviewer's Perspective

Mary J. Moore, director, Libraries, Briscoe Library, University of Texas Health Science Center–San Antonio

My experience is as much in being a grant reviewer as in getting grants. Working with experts in the review process, as well as my many years of experience with evaluation and qualitative research, has really helped hone my grant writing and project management.

Taming Evaluation Research Data: Organizing and Reporting Your Results

Cynthia Olney, evaluation consultant, Greensboro, NC

Most evaluation research does not fit into traditional research reporting formats. Also, because evaluation research is more case study in nature, people who run and evaluate projects and programs have an overwhelming amount of data and often do not know how to report it. I will present my strategy for choosing the data to report based on audiences *and* based on how evaluation research specifically contributes to "knowledge."

Taxonomy Development for Meaningful Data Analysis

Catherine Arnott Smith, assistant professor, Information Studies, Syracuse University, Syracuse, NY

The Ten Thousand Questions Project, funded by the Medical Library Association's Donald A. B. Lindberg award, has meant the collection of thousands of consumer health-related questions. Meaningful organization of data along data-driven themes is a necessary, but intimidating, step for all knowledge workers, and it is a task for which librarians are professionally better equipped than most. I will talk about how I developed a taxonomy for questions based on previous research in librarianship, information science, computer science, nursing, medical informatics, and all of the above!

Technology

Cancer Librarians, Collection Development, Research, and Technical Services Sections

Impact of Open Access (OA) Publishing

Tuesday, May 17, 2:30 p.m.–4:00 p.m.

A New Publishing Model for Digital Educational Materials: Peer Review for the Health Education Assets Library (HEAL)

Sharon Dennis, librarian, Multimedia Development, and **Shona Dippie**, metadata specialist, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City, and **Sebastian Uijtdehaage**, assistant professor, and **Sandra McIntyre**, program manager, David A. Geffen School of Medicine, University of California–Los Angeles

Objective: The Health Education Assets Library (HEAL) provides free materials of the highest quality that meet the needs of health sciences educators and learners. A peer-review process and tools were developed with assistance from a national task force and incorporated into library operations. Educators with successful submissions receive a peer-reviewed publication and contribute to a new model of scholarly publishing for digital educational resources.
Methods: The HEAL peer-review process for digital educational materials is similar to that of the traditional peer-review model used by scholarly journals. The process ensures that: users of the digital library have access to high-quality materials judged relevant to health sciences education by experts in the field; faculty authors receive formal recognition for the development of digital educational materials; and the collection will continue to grow since faculty have an incentive to submit materials. Peer review is part of a multipronged approach for quality assurance. After rigorous preliminary screening, materials are forwarded to the appropriate review panel, assessed using a standardized

instrument, and accepted for publication, accepted with modifications required, or rejected. Details of the peer-review process, its integration into the accession and cataloging workflows, and results from the first six months of the review process will be presented.
Results: A peer-review implementation plan was created by HEAL's editor-in-chief in consultation with a national task force. Existing collection development strategies, initial triage criteria, approaches to author communication, and cataloging practices were adjusted with introduction of the review system. A basic sciences review panel was the first of three planned to be established. As of February 22, 2005, the database of peer reviewers contained 102 volunteers and 22 reviews were complete or underway. Both new and previous past submissions were reviewed to establish a consistent quality standard for all material published in HEAL.
Conclusions: HEAL's review process encourages academic recognition of digital educational scholarship, ensures the quality of published materials, assists members of the health sciences education community in locating the best, most suitable resources for their teaching and learning, and provides incentive for educators to publish their work via an open access forum.

Can We See Clearly Now? What Are the Impacts of Open Access on the Vision Science Literature?

Pamela C. Sieving, biomedical librarian/informationist, NIH Library, National Institutes of Health, Bethesda, MD

Objective: To determine the impact of current and proposed open access initiatives on publication patterns in the vision science literature and on global availability of this literature.
Methods: (A) Based on holdings of Association of Vision Science Librarians' member libraries and ISI's impact factor ratings, core ophthalmology, optometry, and vision research journals were identified and their participation in electronic publication and open access programs was determined; (B) Using impact factor trends, the impact of electronic publication and open access programs was examined. Three free, electronic-only journals (*Molecular Vision, BMC Ophthalmology,* and *Journal of Vision*) were examined as special cases; (C) The impact of the National Institutes of Health (NIH) public access policy was examined in this subset of the biomedical literature.
Results: Few highly cited vision science journals have adopted free- or open-access publication programs. Three new electronic journals demonstrate that this can be a viable publication option. The proportion of highly cited vision science literature to which the NIH policy applies mirrors the broader biomedical literature closely; the policy applies to a small percentage of total vision research.
Conclusions: Several new models for scientific communication in basic and clinical vision research exist and have demonstrated their utility and appeal. However, the majority of the literature in this field continues to be published in established subscription-only journals. The NIH public access policy and other new models deserve continued promotion and evaluation.

Linking to Open Access Publications: The Library's Role

Anneliese Taylor, collection development manager; **Paul Wakeford**, manager, Resources Management; **Alan G. Daniel**, serials electronic resources specialist; and **Beatrice Mallek**, head, Digital and Original Cataloging; Kalmanovitz Library and Center for Knowledge Management, University of California–San Francisco

Objective: This paper will describe the efforts of technical services and collection development staff to increase exposure to a variety of open access (OA) journals. It will also demonstrate the challenges presented by selecting and processing open access materials.
Methods: OA publishing is an important tool for reshaping the traditional publishing model of paying high prices for scholarly research results. The library has selected OA journals for inclusion in the online

public access catalog for several years. Within the last year, the library increased this activity significantly due to the focus on OA publishing in the academic world. Selecting, cataloging, and linking to OA material brings a new set of challenges to libraries. This paper will discuss how the library accomplished these tasks as well as how it addressed issues ranging from verifying the authority of previously unknown publications to determining how to activate titles in linking software that only allow open access to certain sections.

Results: Integrating OA journals in the technical services processing workflow was similar to traditional journals with a few exceptions. Additional steps were needed to indicate content or access-date restrictions for partially OA journals. Adding links for online OA content resulted in several, sometimes duplicative access points for many journals. The number of choices overwhelms some patrons, particularly when faced with multiple service providers from the linking software, SFX. Also, many links from SFX to OA journal articles do not work properly. For catalogers, more links equals more maintenance, particularly for those journals without persistent uniform resource locators (PURLs). Several OA journals migrated to subscription-based access shortly after the library added records, resulting in more work to remove them.

Conclusions: Based on the extra steps and increased maintenance required, integrating OA journals into the technical services workflow requires more effort than traditional journals. The library plans to continue selecting and processing OA journals and therefore will spend more time working with this material type. It will address issues such as SFX linking problems and streamlining the maintenance of OA journal records, so that the library community has seamless and reliable links to these valuable research materials.

Open Access Publishing: A Researcher's Point of View

Andrew Vickers, research methodologist and biostatistician, Memorial Sloan-Kettering Cancer Center, New York, NY

Background: Until very recently, the predominant system for publishing the results of peer-reviewed medical research was the paper journal. In order to access published papers, a researcher either had to subscribe to a journal or visit a library that had bought a subscription. As publishing costs were borne by subscribers, this model is known as "user pays." It was an effective model that worked for many years and had no real alternative. However, technological advances associated with the rise of the Internet allow a different system, in which the author pays for the costs of peer-reviewed publication on the Web. The corollary of "author pays" is that information is free to the user, in other words, "open access." How as I researcher do I contrast the "open access" approach to the traditional publishing model?

Discussion: On careful examination, the "user pays" system is deeply problematic. First, it is highly inefficient: it has been calculated that it costs the scientific community approximately $5,000 per article published compared to ~$500 in the user pays model. Second, it is fundamentally at odds with a key principle of science, which is the free flow of ideas and the widest possible dissemination of data. Third, it is inequitable: the "user pays" model depends on restricting access to freely donated medical data, some of which is lifesaving. Conversely, recent initiative such as BioMed Central have demonstrated that "open access" is not a utopian fantasy, but a viable publishing strategy. My own personal experience of open access publishing has been that peer review is excellent and that papers are read far more widely than in traditional journals. The downside is that open access journals currently do not have the same reputation as some more traditional journals, and this, probably unjustly, makes them a less attractive venue for publication.

Conclusion: Open access is here to stay. From the researcher's point of view, it is the optimal method of scientific communication.

Section Programming 3

Clinical

Nursing and Allied Health Resources, Corporate Information Services, and Public Health/Health Administration Sections and African American Medical Librarians Alliance SIG

The Role of Information and Policy in Health Care

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Disadvantaged but Not Disconnected: Everyone Goes Local

Diana McDuffee, library and information services network director, North Carolina Area Health Education Center, and **Christie Silbajoris, AHIP**, project director, NC Health Info, Health Sciences Library, University of North Carolina–Chapel Hill

Objective: Demonstrate to governmental health care policy makers and prospective funding agencies that a statewide Website that provides online health and local health services information is used by and is beneficial to disadvantaged people.

Methods: Using the program logic model, an evaluation of a local health services Website will be conducted to gather information to show how online health information can be used by uninsured, underinsured, and Medicaid eligible persons. Methods will include a customized pop-up user survey mounted on the Website for three different types of respondents: the general public and two groups who act as intermediaries to the disadvantaged: librarians and health care professionals. We will analyze the ongoing collection of user-contributed comments and questions submitted to the Website. In addition, we hope to utilize observational usability sessions conducted with disadvantaged participants in health care and social service settings.

Results: Due to the widespread use of "pop-up" blockers, our initial Web survey yielded a limited number of usable responses. However, analysis of user comments and questions from the Website, surveys, and interviews indicate that the need for Web-based health and health services information by uninsured users is significant. In fact, the urgency of the need for this kind of information from this group is impressive.

Conclusions: As we continue to build support for participation in NC Health Info by health services agencies we are compiling a case report that includes: examples of requests made to the site, information on usage at public libraries and health clinics, and findings from literature searches on consumer health and the digital divide. Additional surveys of users and intermediaries are anticipated. The collection of user comments is ongoing.

Utilization of the Medical Librarian as a Provider of Information Services on Health Policy and Health Disparities for State Medicaid Programs

Peter W. Droese, health policy librarian, Office of Medicaid, Executive Office of Health and Human Services, Boston, MA, and **Nancy L. Peterson**, associate director, Lamar Soutter Library, University of Massachusetts Medical School New England States Consortium Systems Organization–Shrewsbury

Objective: An examination of the expanded role of two solo medical librarians in supporting Medicaid programs by functioning as expert searchers and collection development specialists in health policy and multicultural health from a state and regional perspective. The paper will document the emerging focus on health policy as a priority for medical librarianship.

Setting/Participants: Solo librarians for the Massachusetts Medicaid (MassHealth) program and the New England States Consortium Systems Organization (NESCSO).

Brief Description: The MassHealth librarian initially focused on acquiring library materials and providing research support on culturally competent health care and outreach as part of the United States Department of Health and Human Services Culturally and Linguistically Appropriate Services in Health Care Standards. The NESCSO librarian focused on state Medicaid system issues surrounding the Health Insurance Portability and Accountability Act (HIPAA). Their research focus expanded to more directly support clinical and administrative policy development. Of note, the availability and dissemination of information to policy leaders facilitated efforts to reduce health disparities. In Massachusetts, this led to a state legislative special commission to eliminate health disparities. On a regional level, the NESCSO librarian provided collaboration opportunities for states in New England to share ideas on the topic.

Results/Outcomes: State Medicaid programs are being called on to respond to the need to provide culturally competent care for beneficiaries of their programs. In addition, state agencies are being asked to collaborate to work toward the goal of eliminating health disparities. The medical librarians have the opportunity to take a leadership role through the dissemination of evidence-based health care information to local and regional policy makers. As expert searchers, medical librarians are uniquely qualified to provide access to information related to health care disparities and to meet the increased demand for information on the topic

Evaluation Method: Reference statistics and patron feedback were collected and analyzed by type of information requested from 2003 to 2004.

Bridging the Gap on Health Disparities: A Librarian's Role

Annabelle Nunez, Hispanic Center of Excellence (HCOE) Services librarian, Arizona Health Sciences Library, University of Arizona–Tucson

Who you are, where you live, and what your level of income is factor into your health status. Health disparities are a result of lack of access to health care, lack of access to health information, and lack of cultural competency in the health care system. Eliminating health disparities in the United States has become a challenge for many in the health care workforce. Understanding contributing factors to these disparities is fundamental for health care providers and policymakers. Librarians are key to linking comprehensive health information and policy development to these stakeholders. This is important in order to create and sustain health care policies that will have an impact on disparity outcomes. This presentation will offer strategies for identifying areas of disparity, the resources for information related to disparities, methodologies for access and information distribution, and, most importantly, the stakeholders.

Pharmacy and Drug Information Section

EMBASE.com Lecture

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Promoting Safe Use of Herbals

Jose O. Rivera, director and clinical associate professor, College of Pharmacy, University of Texas–Austin, El Paso, TX

The presentation will include current research on the United States and Mexican border and a review of selected herbs and the Herbal Safety Website.

Diversity

Leadership and Management, Health Association Libraries, and Hospital Libraries Sections

Managing Library Schizophrenia (Part II): Diverse Roles to Diverse Constituencies

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

The Psychology of New: Managing New Roles and Services for New Users

Nancy Allee, AHIP, director, Public Health Library and Informatics, University of Michigan–Ann Arbor

Objective: Finding the right niche for the library in a complex organization requires innovative management strategies and techniques. This project describes a year-long effort to reimage an academic health sciences library:
1. by incorporating new strategic initiatives in health sciences education, new theories in management of information services, and new organizational structures to meet the needs of new user communities and
2. by introducing new technologies for learning and creating new roles for librarians and information technologists.

Methods: Case study: This project profiles the reconfiguration and reimaging of information services and technologies in an academic health sciences library to respond to changing organizational perspectives and user needs. Creating a new image of the library included conducting an environmental scan of new forces influencing and shaping the health sciences curriculum, developing a new model for providing information services, redefining roles for librarians and information technologists, establishing a plan for outreach to diverse audiences, formulating marketing strategies for introducing and promoting new services, integrating new technologies for learning, and exploring new partnership alliances and collaborations. New roles for librarians that are described include informationists and instructional technologists. New technologies for learning that are featured include Web-based tutorials and rich media modules. The introduction of these new roles and new learning technologies offered the opportunity for reaching new user communities.

Results: Evaluation methods to determine the success of the reimaged library and its services are shared, focusing on user satisfaction surveys, usability testing of online resources, task-specific assessments, focus groups, peer evaluations, and Web usage statistics.

Conclusions: Insights gained from this experience in creating and defining a new library identity will be useful to colleagues managing organizational change and providing services to diverse user communities.

Using the Association of Academic Health Sciences Libraries' *Charting the Future* to Reposition an Academic Health Sciences Library for Knowledge Management

Mary Moore, director, Libraries, and **Jonquil Feldman, AHIP**, assistant to the director, Office of the Director, University of Texas Health Science Center–San Antonio

Question: How can a health library reposition itself for knowledge management in the future when its traditional strengths have been in collections and outreach services?

Methods: A visioning session on knowledge management was held in June 2004, with fifty institutional leaders and invited guests from the community and health libraries. The session was cosponsored by the library and the information management department. The Association of Academic Health Sciences Libraries' (AAHSL's) *Building on*

Success: Charting the Future of Knowledge Management was used as springboard for opinion leaders to discuss alternative futures for the library. An AAHSL futurist was the keynote speaker. The group was asked to identify key questions with facilitators, brainstorm alternative futures, and prioritize collaborative initiatives. Reporters documented the results, which appear on the library's knowledge management Website. A knowledge management email list was begun and follow-up planning activities were planned for winter of 2005 to continue the momentum. The most important thing about this initiative has to do with the resulting collaborative projects and the successful and practical use of the AAHSL report.

Results: Use of the report has had a tangible, financial impact on the library, with increases of more than half a million dollars to support knowledge management projects. The library has received two internal grants to help build a database on regional consumer health resources and a learning objects repository. Grants on virtual anatomy, visualization, and simulation technologies and a nationwide repository for learning objects for teachers of family medicine have included the library as a partner. Since the visioning session, perspectives on how the library can contribute to the institution have broadened. The library has been represented in groups such as one exploring how to link electronic health records to decision-making databases and another documenting excellence in teaching.

Conclusions: The AAHSL knowledge management report allowed us to reposition our library for the future. Many local opinion leaders readily accepted its vision of what a library could be, and it sparked their imaginations to create even more visionary partnerships.

The Case of Treatable, Curable Librarian Acute Reactive Psychosis

helen-ann brown, AHIP, information services librarian, and **Diana Delgado, AHIP**, information services librarian, Weill Cornell Medical Library, Weill Medical College of Cornell University, New York, NY; and **Diane Cmor**, reference librarian; **Tracy Havlin**, reference librarian; and **Karen Joc**, reference librarian; Distributed eLibrary, Weill Cornell Medical College in Qatar, Doha, Qatar

A Clinical Case Scenario: Several well-appearing, non-stereotypic librarians present to the emergency room (ER) complaining of recent onset anxiety and distress. They perform similar tasks at two campuses of the same organization, however the facilities, funding amounts, user base, and campus cultures are very different. These librarian patients ask, "How can we work together and offer excellent information services to two such diverse campuses?" Past history is contributory to what looks like symptoms of acute reactive psychosis or schizophrenia. The librarians at Weill Medical College of Cornell University (WMC-NY) experienced a great deal of change. The institution changed its name, curriculum, and some of its key personnel. Additionally, an announcement came of a new campus in Qatar (WCMC-Q) with a very different type of library. On physical exam, the etiology for this condition became apparent. The library at WMC-NY serves 100 students in each year of its four-year medical school. The Distributed eLibrary at WCMC-Q serves the same medical school, as well as a two-year premed basic science program. Their first medical school class began in fall 2004 with sixteen students. The library at WMC-NY is predominantly traditional with increasing access to electronic resources, whereas the Distributed eLibrary at WCMC-Q is almost entirely electronic with pods spread throughout. The WMC-NY Library has four information services librarians and WCMC-Q has six "roving" reference librarians. Hours of reference services are also different. The library at WMC-NY struggles for dollars, whereas so far the Distributed eLibrary at WCMC-Q has been well funded. The curriculum is identical, however; lectures from New York are video-streamed for presentation two weeks later in Qatar. Based on the past history and physical examination, a diagnosis of library schizophrenia was made. The treatment plan prescribes full collaboration to lobby for shared goals. There has already been a bolus of negotiations to license shared electronic resources, discussions about library instruction and curriculum support, exchange visits to understand cultural differences, and improved communication efforts via email and iChats. The prognosis is promising for these librarians, because the therapies have begun to ease anxiety, minor distress, and envy.

Mixed Messages: Finding Out What Your Patrons Really Want

Patrice A. O'Donovan, AHIP, Portland Campus library director, Portland Campus Library, Linfield College, Portland, OR; **Dolores Z. Judkins, AHIP**, head, Research and Reference Services, Library, Oregon Health & Science University–Portland; and **Peggy R. Baldwin, AHIP**, library manager, Health Sciences Library, Providence Portland Medical Center, Portland, OR

Objective: This paper will report on the use of the online survey tool SurveyMonkey by member libraries of the chapter.

Methods: SurveyMonkey is an online survey tool that is freely available for use in creating basic Web surveys and requires a subscription for value-added features. The Pacific Northwest Chapter of the Medical Library Association purchased a subscription for its members in 2003. It has been used extensively by its members for a variety of surveys during the past two years. This presentation will give an overview of SurveyMonkey, discuss its myriad features, and present examples of how it has been used in a variety of libraries. It will also include information and tips on planning, developing, and administering Web surveys.

Medical Informatics, Medical Library Education, and Technical Services Sections

Medical Information Diversity: Results of an MLA Survey

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Medical Information Diversity: Results of an MLA Survey

Catherine Arnott Smith, assistant professor, School of Information Studies, Syracuse University, Syracuse, NY; **Linda Hogan**, director, Medical Informatics and Clinical Tranformation, Catholic Health East, Pittsburgh Mercy Health System, Pittsburgh, PA; **Douglas Joubert**, biomedical informationist, NIH Library, National Institutes of Health, Bethesda, MD; and **Diane Wolf, AHIP**, associate director, Medical Libraries, Wilmington Hospital Library, Christiana Care Heath System, Wilmington, DE

This panel focuses on results of an MLANET survey conducted in October and November 2004, and cosponsored by the Medical Informatics, Medical Library Education, and Technical Services Sections. This survey asked MLA members to inform us how they were educating themselves—online, in classrooms, in continuing education classes and library and information schools—and in what areas. We also gathered opinions on the role and relationships of health care informatics, the informationist, and the medical librarian. Data from the survey will be presented during this panel. Panelists were also selected for their ability to illustrate and respond to certain themes in the survey data. They include librarians who implement clinical information systems, serve as liaisons with clinicians in academic medical centers, and work with National Institutes of Health (NIH) researchers as informationists.

Education and Outreach

Educational Media and Technologies, Health Association Libraries, and Public Services Sections

Educating Ourselves and Our Users about Copyright

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Copyright 101: How to Make It Easy to Do the Right Thing

Brenda L. Seago, AHIP, director, Computer Based Instruction Lab; and **Jeanne Schlesinger**, director, Instructional Development, and **Chris Stephens**, director, Applications Development, Office of Faculty and Instructional Development; and **Anita Navarro**, director, Curriculum Office; School of Medicine, Virginia Commonwealth University–Richmond

Objective: This paper details ways faculty were educated about fair use guidelines and copyright in the process of converting paper syllabi to electronic syllabi that were posted on the Web.
Methods: In the process of converting paper syllabi that had not been altered in many years to Web syllabi, we alerted faculty that there were images whose sources were not identified. Because the syllabus was going to be on the Web for all the faculty, as well as students to see, we encouraged faculty to identify images so that we could seek copyright permission as a school to use them. In order for the project to be successful and not become bogged down, we attempted to identify image sources and track down copyright holders for faculty members, while at the same time recommending the use of original images to correlate with lecture material. Some images that faculty identified as "common use" came directly from textbooks. We used this opportunity to individually educate faculty in nonthreatening ways about fair use and copyright. Faculty development sessions held later in the year highlighted faculty who used original images and who "had done the right thing" by seeking permission to use images.
Results: Fair use checklists and copyright forms were developed for faculty to assist them in assessing whether or not it was necessary to seek copyright permission to use selected images and other materials in the Web syllabi.
Conclusions: There is now an awareness of copyright issues by School of Medicine faculty and a number of resources at their disposal to assist them in "doing the right thing."

Intellectual Property Policy Development: Mapping Your Institution's Course to a New Future

Richard Nollan, AHIP, special collections coordinator, Health Sciences Library, University of Tennessee Health Science Center–Memphis

Objective: Many institutions are updating their intellectual property policies in light of technological changes that have occurred over the last fifteen years. Librarians participating in this process have a unique opportunity to contribute to their institution and to demonstrate their value outside the library. The author will report on the procedure that is typical for academic health center.
Methods: The discussion will include the ways academic health centers revise policy on their campuses and will include how and why librarians should be involved in this process. Copyright is the overwhelming concern, but patent and trade secret laws will be mentioned. Even though the application of the copyright law is limited in libraries, librarians have an understanding of the law that is better than nearly anyone else on campus. The overarching issues that are of concern both to administrators and to faculty members will be outlined. The consequences to the librarian and the library of this work will also be discussed.

Copyright on Campus: New Roles for Libraries

Susan Lessick, head librarian, Grunigen Medical Library, University of California–Irvine, Orange, CA

Objective: To report on the author's involvement with the University of California (UC) Copyright Education Website and how that involvement underscored the need to improve the quality and delivery of copyright information, education, and support services available to faculty and possible new roles for the library in responding to those needs.
Methods: The UC Copyright Education Website www.universityof california.edu/copyright/ launched in October 2003, serves as a primary educational resource for the UC community, assembling a wide range of authoritative and informational materials related to the use of copyrighted and public domain materials by individuals and educational institutions. The site was developed by the author in her role as special associate for copyright education planning at the UC Office of the President, after gathering and organizing relevant UC system-wide and campus policies and resources and reviewing available Web sources pertaining to copyright and higher education. The content of the site was also based on results of a needs assessment and questions from the faculty grantees in the UC's Teaching, Learning and Technology Center competitive grants program regarding licensing and registering copyrights, collaborative agreements, how to tell if works are in the public domain, rights clearance, fair use, and UC's intellectual property interests.
Results/Conclusions: This paper describes lessons learned during the creation of the Website and explores possible emerging roles for libraries in copyright. Topics addressed include copyright activism; copyright education, services, and tools; optimal copyright management; permissions services; promotion of public domain works, open access publishing, and institutional repositories; and opportunities for campus partnerships.

Mickey and Me: Disney, Copyright, and Digital Decisions

Nancy Allee, AHIP, director, Public Health Library and Informatics, University of Michigan–Ann Arbor

Objective: The digital environment introduces new challenges in addressing copyright issues. This project describes the establishment of a video production studio and the need to create resources, such as Web guides and permission forms, for guiding the understanding of copyright policies and procedures for instructors and audiences.
Methods: Case Study: This project describes the establishment of a video production studio in an academic health sciences environment. The studio is used to produce a variety of resources in support of online learning programs, including streaming video, CD ROMs and DVDs, course materials, and rich media modules. Frequent questions arise about copyright policies and procedures. In response to user need, a digital copyright education program was developed, featuring a Website with copyright information, a library consulting service, a copyright workshop, an online tutorial, and sample permission forms. The program is designed to help librarians and information professionals educate users about copyright and digital resources.
Results: The program was evaluated using surveys and usage statistics for the Website and online tutorial.
Conclusions: Librarians provide valuable resources to users for understanding copyright policies and issues important in the digital environment.

Public Services and Pharmacy and Drug Information Sections

UnGoogling Information Literacy in the Health Sciences

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Leveraging Google Skills

Julia Shaw-Kokot, AHIP, assistant department head, User Services, and coordinator, Education Services, and **K. T. Vaughan**, bioinformatics and pharmacy specialist, Health Sciences Library, University of North Carolina–Chapel Hill

Objective: Identify methods that help teach literacy skills by highlighting the use of information-seeking tools including Google and other Internet search engines. This presentation will look at ways to stimulate interest in a variety of resources that meet the information need.
Methods: Almost everyone at the university uses Google, from summer junior high school students to retired alumni. The library provides instruction for a large academic institution with both traditional and distance students. Information-seeking assignments have long been used to teach literacy skills. Information literacy means using a diverse array of resources to answer a wide variety of needs. By offering alternatives that save time and provide more precise results for many questions, students are able to put Google in perspective. For example, first-year pharmacy students are required to complete an online assignment to find information related to various topics. The first assignment directs them to resources including Google. They may select any resource that will answer the question for the second assignment. Rather than "UnGoogling," this approach allows for an informed comparison of resources that meet the information need.
Results: Results and conclusions will be shared during the presentation.

Stanford's Information Literacy Continuum

Christopher Stave, information services librarian; **Rikke Ogawa, AHIP**, information services librarian; and **Heidi Heilemann, AHIP**, associate director, Research & Instruction; Lane Medical Library and Knowledge Management Center, Stanford University Medical Center, Stanford, CA

Objective: To create an integrated information literacy continuum targeting health sciences personnel at all levels of professional development: medical student to resident to post doctoral scholar to faculty or clinician.
Methods: Lane Medical Library and Knowledge Management Center serves Stanford University School of Medicine, two teaching hospitals, and many remote faculty at affiliated hospitals and clinics. Over the past two years, the library launched a new liaison program at the same time the medical school curriculum was reformed. Acknowledging that technology has changed expectations about how professionals learn and discover information, the library expanded its instructional program and became a training hub for the medical center community. Using input from focus groups, the library tailored its information literacy curriculum more closely to the cycle of professional development. New teaching partnerships enrich the library's curriculum and underscore the interconnectivity of information literacy to a broader array of professional skills.
Results: Lane's teaching in the School of Medicine program is a formal part of required preclinical coursework, with plans underway to expand into required clinical coursework. The total number of residency training programs participating in information literacy workshops and presentations rose by 35%, between July 2002 and July 2004. During the same period, overall attendance in the library's regular instructional classes increased by 120%, from 414 to 918. Postdoctoral scholars currently comprise over 50% of total registrants for these courses. The number of special outreach/liaison sessions for departments increased 31%, from 88 to 115.
Conclusions: Lane's information literacy program has shown a resurgence over the past two years throughout all levels of professional development. Key elements in its recent success include: promoting courses through Lane's liaison program, incorporating feedback from focus groups, collaborating with nonlibrary instructors to supplement local expertise, and implementing creative instructional methods.

Developing an Innovative, Integrated Curriculum to Teach Information Literacy and Management Skills to First-year Medical Students

Linda J. Collins, AHIP, user services librarian and School of Medicine specialist, Health Sciences Library, University of North Carolina–Chapel Hill

Objective: This paper examines the development and implementation of a state-of-the-art introductory informatics course to enhance first-year medical students knowledge and use of key information resources and bibliographic management tools.
Methods: Faculty and staff from the educational technology group at the University of North Carolina (UNC)-Chapel Hill School of Medicine partnered with the medical school specialist from the Health Sciences Library to design and teach a required informatics course for 160 first-year medical students. The course planners worked closely with basic science faculty to ensure continuity between the informatics class content and the basic science curriculum. To supplement conventional lectures, an advanced educational software program provided PowerPoint lecture notes, live Internet linking, prerecorded audio, and streaming video into an integrated multimedia presentation. Class assignments were correlated with clinical case conferences presented by medical school faculty. This paper will describe the course planning process and the curriculum content. It will also cover challenges, triumphs and the development of a pre- and posttesting assessment tool.
Results: Students' performance on the posttest showed significant gains in information literacy skills. The most notable improvements centered on more knowledge of PubMed features and more effective PubMed searching, including advances in understanding the use of Medical Subject Headings (MeSH) terms.
Conclusions: While our curriculum-integrated approach to teaching information literacy skills enjoyed some success, it will be critical to find ways to reinforce this knowledge throughout the four years of the medical school curriculum.

Research

Dental and Research Sections

Trends in Oral Research

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

The Changing Landscape of Oral Health Research

Karen Adler Storthz, professor and associate dean, Research, University of Texas Dental Branch–Houston

The objective of this presentation is to provide an overview of the latest advances in oral health research. The newest technological tools for diagnosis and treatment of diseases of the orofacial complex will be presented. Topics will be advances in genomics and proteomics, tissue engineering, molecular imaging of oral cancer, salivary diagnostics, and the connection between oral health and systemic health. Specific examples will be drawn from the recent literature as well as from the presenter's laboratory research. Also included will be examples of the types of data that will require a shift in the publishing paradigm.

Scholarly Publishing: What's in *Your* Toolkit?

Leah Krevit, associate director, Collections Management, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX

Methods for creating and organizing data are increasing in both number and complexity, largely due to new resources available via the Internet. These new tools—some provided by libraries and some for individual use—offer comprehensive research and publishing services independent of time or place and include such technologies as link resolvers,

metasearch/federated search engines, online bibliographic management tools, and blogs. In addition, choices for publishing venues are no longer limited to traditional journals, but have expanded in scope to include self-archiving, open access journals, institutional repositories, and combinations of these options. This paper provides an overview of this evolving scholarly publishing process, examining new tools for creating and sharing information, as well as new paradigms for publishing the final product. Methods for organizing and sharing local databases and publications, managing this information across communities, and making it available globally will be outlined. An example of one of these new tools, the Scholarly Publishing Blog at the Houston Academy of Medicine-Texas Medical Library (HAM-TMC) will be demonstrated. Finally, the place of libraries in this new "toolkit" will be examined.

International Cooperation Section

Futuro Magnífico: Finding Ways of Connecting the World to Medical Information and Resources

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Improving Access to Information for Health Workers in Zambia

Christine W. Kanyengo, international fellow, NLM, Medical Library, School of Medicine, University of Zambia, Zambia

Information about health status and possible interventions is essential on all levels, especially at the level were health services are delivered: community, rural health centre, hospital, and district level. Despite various priority needs in many other areas, access to health-related information is considered essential as a condition for maintaining the motivation, knowledge and skills of staff working in health care delivery situations. It is also a prerequisite to any successful intervention in public health. There are quite some obstacles to overcome before adequate information is available and would be really "consumed and digested" by health staff and other stakeholders. In spite of the limitations, excellent examples of local initiatives show that, even under the given extreme circumstances, it is feasible to improve health workers' access to information. These existing local initiatives deserve to be scaled up, while new initiatives should be taken to improve access to information in a structural way. This requires more technical guidance and better coordination of the various stakeholders in the area of health-related information, both within and outside the government health system. Specific suggestions are made to reach consensus among all stakeholders on how to translate the results of this study into concrete policies, strategies, and activities that will improve access to information at all levels of the health care system, both governmental and nongovernmental.

The Global Review on Access to Health Information in Developing Countries: Progress So Far

Bruce Madge, sub librarian, The Library, British Medical Association, London, United Kingdom

Program Objective: The recent draft "World Report on Knowledge for Better Health" (WHO) argues that "access to relevant, reliable and up-to-date health and health research information [in] the developing world must be improved and must take into account the needs of diverse groups of constituencies and stakeholders." The review was launched at the British Medical Association on July 12, 2004, alongside the publication of a discussion paper in *The Lancet*.
Methods/Resource: The author will review progress so far with the Global Review to present a personal view of what has been happening with this project and where the project plans to go in the next year.

Participants: These include the Alliance on Health Policy and Systems Research, Association for Health Information and Libraries in Africa (AHILA), Latin American and Caribbean Centre on Health Sciences Information (BIREME), *BMJ*, The Cochrane Collaboration, Forum for African Medical Editors, Global Forum for Health Research, Interactive Health Network, International e-Health Association, *The Lancet*, Medical Library Association, Society for the Internet in Medicine, South Asian Public Health Forum, Wellcome Trust, World Health Organization, and the WHO Eastern Mediterranean Regional Office.
Results: The review is continuing as a common theme through a series of existing international and country-level meetings already scheduled for 2004/05, each organized by one or more of the participating organizations. The Steering Group for the review includes one representative from each participating organization, and each member is taking responsibility for coordination of a specific component of the review. The Steering Group is assisted by an Expert Advisory Panel.
Conclusions: We expect to see a real increase in financial commitment to health information activities worldwide over the coming months. If we are right, this Global Review will serve partly as a mechanism for those in positions of influence to "take into account the needs of diverse groups of constituencies and stakeholders." If we are wrong, the review will have an important role as a platform for collective advocacy.

The Impact of Information Technology on Health Information Access in Sub-Saharan Africa: The Divide within the Divide

Lenny Rhine, assistant director, Collection Management, Health Science Center Library, University of Florida–Gainesville

Objective: The paper will review the impact of information technology (IT) on the access to health information in Sub-Saharan Africa. It will be comprised of four sections:
• level of health information in Sub-Saharan Africa prior to the IT revolution
• technological developments that have impacted on health information delivery and how they apply to developing countries
• current projects that facilitate access to health information in Sub-Saharan Africa
• review of progress, lessons learned and ways forward
Methods: The "Level of Health Information" section will review the general status of health information centers in Sub-Saharan Africa during the print format era. The section will summarize how, by the mid-1990s, the Sub-Saharan African health information centers became archives of dated material with little current information. The "Technological Developments" section will include a brief summary of the IT revolution and its impact on the accessibility of information—from CD-ROM to the Internet, email and Web. It will assess the current level of access and the implications for the delivery of health information. In the "Current Projects that Facilitate Access" section, the paper will summarize specific projects that have positively impacted on the availability of health information in Sub-Saharan Africa during the past fifteen years. Predominantly nongovernmental agency developed programs, these activities have utilized CD-ROM, email lists, Web gateways, and full-text Internet portals. The "Review of Progress" section will summarize the activities of the "Access to Information for Health Professionals in Developing Countries: A Global Review of Progress, Lessons Learned, and Ways Forward" project. Initiated in April 2004, the Global Review is evaluating the impact of IT in developing countries and is assessing what has and has not been successful and what will facilitate better resource utilization during the next ten years.

Making Magnificent Connections

Ellen N. Sayed, AHIP, interlibrary loan coordinator, Biomedical Library, University of South Alabama–Mobile

Historically, access to information has not been readily available to the public. In ancient times, libraries were only accessible to scholars;

in the Middle Ages, monks preserved books in monasteries. After a century of the plague, with no forthcoming treatment, the Europeans asked the medical community for access to medical information, so they could make their own decisions. The printing press further enhanced the dissemination of information. Today, the Internet and the Web have the potential to connect and interconnect the world, but many people around the world do not have ready access to this "connector" to information. Many countries lack the technical infrastructure and/or expertise or the resources to connect their people to the Web. The result is a widening gap of haves and have-nots in terms of access to information. Many reports have been made to International Cooperation Section (ICS) and MLA on efforts to assist librarians and others around the world in improving access to information in their communities (Iraq, Latvia, Antigua, Africa, HINARI) to improve health outcomes. Our section has been active in this regard. Medical publishers have joined in an effort to improve access to information in developing countries. The Biomedical Library at University of South Alabama has had the opportunity, along with other medical libraries, to be involved with a sister library, in addition to providing document delivery services to foreign libraries. Issues to consider in these outreach efforts across borders, are: the technical infrastructure and expertise in the particular country or library, training of staff if possible, maintenance of equipment, funding for supplies, awareness and respect for differences in cultures, and continued support. Making Magnificent Connections makes for a Futuro Magníifico!

Technology

Federal Libraries, Collection Development, and History of the Health Sciences Sections

Digitization, Preservation, and Authentication of Resources

Wednesday, May 18, 2:30 p.m.–4:00 p.m.

Government Printing Office Strategic Vision and What It Will Mean for Public Access to Government Information

Judith Russell, managing director, Information Dissemination, US Government Printing Office, Washington, DC

Purpose: Explain how the Government Printing Office (GPO) is meeting various information needs of the nation.
Brief Description: GPO has recently published "A Strategic Vision for the 21st Century," which lays out broad objectives for the agency. With 95% of the new titles added to the Federal Depository Library Program available online, every library now has the ability to access a wide array of government information for its patrons with no fee. Understanding what is already available—and what is coming soon—can help each library plan for the integration of electronic Government information into its reference and public services. The GPO plan focuses on three missions: providing federal agencies and organizations with expert printing and publishing services; partnership with the Federal Depository Libraries for perpetual, free, and ready public access; and cost-recovery distribution of printed and electronic government information products to the general public through the Sales Program.
Main Results: The federal government is making a great deal of information available on the Web. There are issues relating to electronic preservation, authentication, and organization that all affect access.

Treasures from the Subbasement: Unlocking a Library's Diverse Collections

Todd Allen Lane, library services assistant III, Medical Historical Library, and **Daniel Dollar**, digital resources librarian, Cushing/ Whitney Medical Library, Yale University, New Haven, CT

Objective: A large academic medical library, formed a cross-departmental implementation team with participants from our university library system to begin digitalizing its unique, diverse collections of historic manuscripts, paintings, and nonprint items for improved public and scholarly access. We report on our efforts in developing a robust, metadata-rich digital library using open source applications and prevailing standards.
Methods: We formed a medical digital library committee to explore digitalization issues concurrent with creating a digital library. The committee divided into subgroups to work on metadata, technology, and user interface issues. For metadata, the committee used a qualified Dublin Core element set with Library of Congress Subject Heading (LCSH) and Medical Subject Headings (MeSH) as controlled vocabularies. The committee choose Greenstone, an open source application, for system platform (runs on Linux server). A research library consortia that integrated DC-dot, a metadata management tool, with Greenstone shared the code for our project. The committee established a digital conversion facility, adopted scanning standards and procedures, and selected initial candidate collections for digitization. The first collection, a series of 19th century oil paintings, commissioned by a missionary physician to China, that depicts patients with severe tumor growths, went live in November 2004.
Results: Additional image and text collections are in process, including collaboration with a faculty member on a set of early electron microscopy images. As the medical library makes its diverse collections more accessible to the world, we plan to be a center of excellence and partner on digital projects at the medical campus. Work on surfacing rich metadata for Open Archives Initiative (OAI)-compliant harvesting, creation of procedural manuals and workflows, and participation in a university library effort to create an institutional preservation repository are ongoing.
Conclusions: We will employ usage statistics, anecdotal comments, and usability testing to evaluate this project and guide further enhancements.

Because You Can't Trust a Publisher with Their Archive . . .

Tony McSean, director, Library Relations, Elsevier, Oxford, United Kingdom

Objective: To develop effective methods and partnerships to ensure the availability of publishers' scholarly heritage to future generations and to current researchers in the event of disaster or ceasing to publish. Specifically to ensure that the Elsevier digitized resource had assured availability for the future.
Methods: Define the technical, professional, operational, and financial criteria that make up "security" and "assured access" and seek partners in the library and information world who are in a position to work with companies to deliver these objectives in the very long term 100 to 1,000 years.
Results: There are still important areas of technical difficulty, particularly in coping with evolving formats and of practical difficulty, particularly in coping with the huge volumes of ScienceDirect traffic. However, a wider programme of collaboration with national libraries and major research libraries promises to be the most effective path for long-term preservation of the Elsevier publication archive.
Conclusions: Progress to date has been highly promising, but more work is required on risk assessment and on strategies to delivery worldwide access to Elsevier material at the required level of traffic.

Poster Sesion: Odd Numbers

Monday, May 16, 4:30 p.m.–6:00 p.m.

1

e-Mental Health in Central Massachusetts

Elaine R. Martin, director, Library Services; **Sally A. Gore**, resource librarian; **Nancy E. Harger, AHIP**, information literacy librarian; and **Lonelyss Charles**, 2nd year NLM associate fellow; Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: To improve access to evidence-based mental health information and local resources for mental health professionals and consumers through information services delivered and enhanced through the Internet.

Methods: The University of Massachusetts Lamar Soutter Library (LSL), in collaboration with the UMass Department of Psychiatry and the Commonwealth of Massachusetts Department of Mental Health (DMH), developed e-Mental Health in Central Massachusetts which provides an integrative information Web-based resource, training, reference and document delivery services. The project targets an underserved population by serving mental health agencies, providers, and consumers with three primary components:

1. Development of a Website designed specifically for Central Massachusetts—an access point for quality-filtered and evidence-based mental health information and local resources.

2. The provision of information skills training focusing on how to effectively search the Internet for mental health and physical health information, including PubMed, MedlinePlus, and other NLM databases and resources.

3. The provision, through the Lamar Soutter Library, of a reference and information resource and referral service, via telephone and email, in support of mental health consumers, providers, and agency staff.

Results:

1. Improved relationships between the LSL and local mental health agencies.

2. Improved access to quality-filtered mental health information for patients and providers.

3. Improved searching skills for users of the e-Mental Health Website.

4. Increased usage of library resources by the Department of Mental Health and the UMass Department of Psychiatry.

Conclusions: Using a multifaceted approach that highlights Web-based resources, training, reference, and document delivery services, e-Mental Health of Central Massachusetts provides mental health agencies and their staff with a useful tool to support their work of providing quality care to individuals throughout the region. Consumers as well benefit from the educational materials and contact information made available through the Website. After training, participants in the program used the resources on a regular basis and demonstrated a greater awareness of how to use the Internet and the LSL effectively to find the information they sought. The collaborative spirit developed between the DMH, UMass Department of Psychiatry, and the LSL during this project continues and will surely benefit future endeavors.

3

Abdominal Abscess to Zygote: The Spectrum of Foci for a Health Sciences Librarian Liaison

Kathy M. Cable, medical reference librarian, and **Jason Cottle**, library assistant, William E. Laupus Health Sciences Library, East Carolina University, Greenville, NC

Objective: Abdominal abscess to zygote? The spectrum of foci for a health sciences librarian liaison

Methods: The Laupus Health Sciences Library supports the East Carolina University's (ECU's) Division of Health Sciences. The library has an active library liaison program established to provide customized services and curriculum and collection development support to departments of the division. One of the most challenging areas for liaison support has been the departments of graduate sciences. What does it take to be a successful liaison to the graduate sciences in a medical setting? You do not have to have a science degree background. Communication is the key to bridging the knowledge gap; it is all about connection and building relationships. At ECU, the graduate sciences disciplines generally prefer that the liaison to go to them. Part of the responsibility of being a liaison is to promote library services to the faculty. The goal is that the interaction between the liaison and their faculty groups will have an influence on medical students and will help expand awareness of library services throughout the graduate sciences' faculty and staff. In addition, just being willing to communicate and continually ask questions can teach a graduate science liaison quite a lot about their specific liaison responsibilities in the science discipline. Through constant communication, a liaison can learn a great deal about their faculty's subject areas and thus become a better graduate science library liaison.

5

International Resource Sharing

Nancy T. Lombardo, systems librarian, and **Joan M. Gregory, AHIP**, Technical Services Librarian, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: International resource sharing at the University of Utah's Eccles Health Sciences Library goes beyond traditional interlibrary loan to collaborations with fifteen countries in projects ranging from instruction to digital libraries. These collaborations were accomplished with an "open source" mindset. If more health sciences libraries provide international services, there could be a more effective distribution of information resources around the globe.

Methods: This poster will describe the process of establishing, extending, and improving services through international cooperation and collaboration. These international collaborations began with the Cyprus Medical Libraries project, which included document delivery, indexing of the Cypriot medical literature, and digitization of selected titles. The document delivery model established in the Cyprus project was expanded and now includes libraries in ten countries. The Internet Navigator, an online information literacy and research skills course, began as a Utah Academic Library Consortium collaboration, led by the Eccles Library. It now includes four international partners, as well as instructors on campuses in three other states, a high school, and a health department. To enhance services in areas where Eccles Library is lacking expertise, the library is collaborating with informationists to provide high-quality instruction. This involves utilizing international instructors via digital videoconferencing.

Results: Over the past six years, the Eccles Health Sciences Library at the University of Utah has developed an extensive international presence through digital resource sharing. Services include instruction, electronic document delivery, shared catalogs, and full-text databases. These projects have benefited the Eccles Library and the international partners. Access to the biomedical literature was enhanced and extended at a reasonable cost with high-speed delivery. Instructional tools were developed to accommodate the needs of diverse institutions. Local patrons were better served through connections to international specialists.

Conclusions: Developing international collaborations is not difficult and provides benefits to all. The benefit to a library with limited funding is dramatic. Partnering libraries benefit from access to unique international expertise and opportunities to view services in a broader perspective. Libraries can evaluate projects and seek to adapt them for the broadest application.

Mobile Computing in Healthcare Fair: An Educational, Promotional, and Social Opportunity for Libraries and Their Users

Dean Hendrix, senior assistant librarian, and **Michelle L. Zafron**, senior assistant librarian, Reference and Education Services, Health Sciences Library, University at Buffalo, Buffalo, NY

Objective: To determine our users' facility with personal digital assistants (PDAs) and their desired PDA library support, librarians at the Health Sciences Library (HSL) at the University at Buffalo conducted a survey directed at the students and faculty in five health sciences schools. To create aggressive and purposeful instructional programming targeting PDA users in the health sciences.

Methods: The HSL created a thirteen-question Web survey to assess our users' PDA usage behaviors and educational needs. Although the survey was designed for the library's primary clientele, faculty and students in the five health sciences schools (medicine and biomedical sciences, dental medicine, pharmacy and pharmaceutical sciences, nursing, and public health and health professions), it was freely accessible as it was posted on the library's Website. Although other information about other mobile technologies was subsequently made available at the fair, the survey was primarily concerned with PDAs. The HSL was interested in determining the popularity of various operating systems and applications, as well as the extent of users' PDA usage and the services and resources they desired.

Results: Users' level of sophistication was presumed to be higher than survey results revealed. Also requested improvements were surprising—several were either already offered by the library or not feasible given the limitations of the PDA medium. The need for PDA training was expressed and evidenced several times in the survey. In response, the HSL hosted the first Mobile Computing in Healthcare Fair held April 23, 2004, tailored to meet the PDA educational needs of our users. The fair was opened up to include other types of mobile technologies. The HSL invited vendors to conduct demonstrations and seminars on their products.

Conclusions: Surveying user populations affords libraries opportunities to provide tailored educational offerings, maximizing the decreasing human and monetary resources that libraries have at their disposal. The Mobile Computing in Healthcare Fair served as that solution, providing an opportunity to promote our information technology support and education responsibilities to previously oblivious users.

Reaching Out to a Diverse Population: Assessing the Information Needs of Faculty in a School of Public Health

Lisa C. Wallis, AHIP, assistant information services librarian and assistant professor, Library of the Health Sciences, University of Illinois–Chicago

Objective: To assess the information-seeking behaviors of faculty in a school of public health (SPH), to identify their perceived barriers to obtaining information, and to determine their preferences for library services.

Methods: Cross-sectional study of all faculty at an Association of Schools of Public Health–accredited school. The SPH liaison librarian contacted all faculty members by email and invited them to participate by completing an institutional review board (IRB)–approved, pilot-tested, fifteen-question Web-based survey. The liaison also sent a follow-up email reminder to all faculty three weeks after the initial invitation. Survey questions measured frequency of use and relative value of types of information resources, specifically in the context of faculty members' research, teaching, and service. Additional questions about perceived searching proficiency, information access obstacles, and familiarity with campus library services identified priorities for future outreach efforts. Academic division in the SPH, faculty rank, and campus employment duration data were collected. Data analysis was limited to basic descriptive statistics, as the small number of respondents restricted the use of inferential statistics.

Results: Forty-five faculty members (23.6%) completed the survey. The majority of respondents (68.9%) frequently search for information themselves, most often using Web search engines (56.8% daily) or campus library journal subscriptions (34.1% daily). Two-thirds of the respondents (n = 26) rarely or never contact a librarian when they have an information need. Lack of time for learning how to use a resource (44.4% frequently) and lack of knowledge about what resources are available (37.8% frequently) are the most often encountered barriers to access. Most would prefer to email (75.5%) or phone (60.0%) a librarian as questions arise rather than attend a class or meet in person.

Conclusions: Data suggest that SPH faculty regularly seek out information to support their research, teaching, and service. However, lack of time and knowledge prevent them from using librarians to help identify resources for their information needs or to help with searching the resources they do use. Future outreach should be aimed at educating them about ways the library can help them access information more efficiently.

EndNote and Reference Manager: How Do Citation Formats and Styles Compare to Those Specified in "Instructions to Authors" for Forty Top Medical Journals

Frances A. Brahmi, AHIP, education and curriculum director, IUSM Libraries; **Elizabeth H. Riley**, clinical research specialist, Medical and Molecular Genetics; and **Carole Francq Gall, AHIP**, gift development officer, IUSM Libraries; School of Medicine, Indiana University–Indianapolis

Objective: To compare citation formats in EndNote (version 7) and Reference Manager (version 11) with citation formats from current "Instructions to Authors" for forty-three selected medical journals.

Methods: The study (conducted between October and December 2004) was designed and implemented by librarians and a school of library and information science intern with an interest in health sciences librarianship. For each medical discipline listed in the 2003 Brandon/Hill list (small medical library), we selected those titles that appeared in both Brandon/Hill and Abridged Index Medicus. We then compared those selected to the most highly ranked journals according to ISI's *Journal Citation Reports* (based on impact factors). The resulting pool of forty-three journals represented one significant journal from each major medical discipline. Eleven important citation format features were compared and the results were tracked in an Excel spreadsheet.

Results: Of the 43 titles examined, 15 (35%) were not included in Reference Manager (RM) style list, while 20 (47%) were not included in EndNote (EN) style list. One title did not include instructions to authors in any form. Of the 21 titles not included in either RM or EN, 11 are association publications, 4 of which are American Medical Association. Of those journals listed in either software, discrepancies with the journal's "Instructions to Authors" were as follows: 40 in 8 categories for EN compared to 81 in 11 categories for RM. Four categories: author, title of article, punctuation, and journal title cited accounted for the greatest number of discrepancies.

Conclusions: Despite numerous discrepancies (only 4 exact matches) between the instructions provided by the publisher and those from the software, both products are useful for preparing references for publication. Most of the discrepancies were minor in nature.

13

Analysis of MedlinePlus en Español Customer Service Requests

Lonelyss Charles, NLM 2nd year associate fellow, Lamar Soutter Library, University of Massachussetts Medical School–Worcester, and **Ronald L. Gordner,** senior reference and customer service librarian, and **Roger Brtva,** systems librarian, Reference Section, National Library of Medicine, Bethesda, MD

Background: Customer service requests in Spanish substantially increased (from approximately 25/month in August 2002 to over 350/month in March 2004) after the September 2002 release of the National Library of Medicine (NLM) MedlinePlus en español with nearly 500 health topics, an illustrated medical encyclopedia, and interactive health tutorials. In November 2003, NLM added Spanish-language drug information from the American Society of Health-System Pharmacists (ASHP) and Spanish language health news.

Objective: To analyze Spanish-language requests received from users of MedlinePlus en español and to evaluate customer service for Spanish-language patrons.

Methods: Customer inquires received through MedlinePlus en español in December 2003 were studied. A comprehensive analysis of the data included an analysis of the users' status and geographic location, types of questions, and responses from reference and customer service staff. Additionally, information was gathered from eight health information organizations serving Spanish-speaking populations.

Results: In December 2003, NLM received 244 Spanish language requests that could be categorized as: reference questions, primarily disease/condition/therapy, drug information, or research requests (84%) or queries or comments about MedlinePlus en español (12%). Approximately 93% of the requests were generated from contact NLM forms from within MedlinePlus or MedlinePlus en español. The main user groups were: general public or unidentified status (89%) and health professionals (7%). The countries most represented were: Mexico (21%), Argentina (16%), and Spain (12%). NLM staff used FAQs and canned responses or stock replies, basic translations, and Websites to respond in Spanish to 98% of the requests. Fact finding at the other organizations found that only NOAH and PAHO also used Spanish language stock replies and FAQs. Three organizations reported that at least 50% of their information requests were received in Spanish (NOAH, PAHO, and University of Puerto Rico), and 6 reported having some level of bilingual customer service staffing.

Conclusions: The majority of Spanish-language customer service requests were answered using basic or enhanced Spanish versions of the most used English language FAQs and stock replies. Bilingual staff were needed to assist with creating new stock replies and FAQs and to respond to a small number of email and telephone requests. An important type of stock reply explains the role of the customer service staff in providing health information and not medical advice to personal health inquiries. Based on this feedback, NLM has made improvements to its Spanish-language customer service.

15

Supporting Physician Leaders as Their Roles Diversify: The Executive Management Journal Club

Diane G. Wolf, AHIP, associate director, Medical Libraries, Christiana Care Health System, Wilmington, DE, and **Sharon Easterby-Gannett, AHIP**, medical/systems librarian, and **Christine Chastain-Warheit, AHIP**, director; Medical Libraries; and **Brian W. Little**, vice president, Academic Affairs; Christiana Care Health System, Newark, DE

Objective: To offer physician leaders, including department chairpersons and program directors, resources for self-education in health care administration and business issues using an intranet portal. The roles of physician leaders now include greater business responsibilities in addition to their clinical responsibilities, and upper management of the health system identified an opportunity to support the diversified roles.

Methods: Library staff collaborated with the vice-president for academic affairs (VP) to create an intranet portal, the Executive Management Journal Club (EMJC). The VP provided the vision and identified key topics; library staff provide the content, organization, and updating of the EMJC portal. Physician leaders are alerted to new content by the VP and library director via email, and they are recruited to review books and identify articles for their peers. The EMJC features cutting-edge topics in health and business administration. Each update reviews one or more books and highlights recent articles. Books are selected and reviewed by upper management, with back-up from the reference librarians. The EMJC has been cumulative, building a virtual executive management library of books, articles and Websites tailored to the needs of senior physician management.

Results: The EMJC portal provides access to highly selected articles, Websites, and books to support continuing education in health care administration. Physician leaders are being surveyed to determine impact of the site, and statistics on visitors to the site are being tracked.

Conclusions: The librarians are benefiting through increased expertise in business literature as well as greater visibility to administrators. This initiative directly serves physician leaders and other senior managers, providing them with value-added resources to support their diversified roles

17

Online Public Health Library (OPHL): Partnering with Public Health

Joan Marcotte Gregory, AHIP, technical services librarian, and **Michael Thelin**, Internet resources cataloger, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City; **Lois Haggard**, director, Office of Public Health Assessment, Utah Department of Health–Salt Lake City; and **Molly A. Youngkin**, public health/Utah outreach liaison, National Network of Libraries of Medicine, MidContinental Region, Salt Lake City, UT

Objective: This poster describes the dynamic partnership among the Utah State Library Division, the Utah Department of Health, the Spencer S. Eccles Health Sciences Library at the University of Utah, and the National Network of Libraries of Medicine, MidContinental Region (NN/LM MCR), to increase awareness of important electronic state public health documents for health professionals and the public.

Methods: Collaboration has been key to the success of this project. The process of involving the state health department; the role of the regional library in bringing the partners together; the technical aspects of finding, creating, and maintaining records of public health documents in the resource library's online catalog; the involvement of the state library division in form development and encouraging participation; and the "push" to get "buy in" from many different public health agencies are all aspects of this collaboration.

Results: A process has been developed for identifying important electronic state public health documents and for notifying the state library division and the resource library when these documents are published and available for cataloging. Health professionals and the public can search for these documents using a search box on the public health department Website. This partnership has resulted in strengthened collaboration among the four agencies and has opened up new opportunities, including plans to archive these documents in DSpace.

Conclusions: The Online Public Health Library Project has increased awareness and improved access to important electronic public health documents in Utah. The partnerships established through this project are opening new avenues of communication and future collaborative efforts.

Updating Reference Services Statistics Collection Techniques for the 21st Century

Kathren Torraca, Web librarian; **Konstantina Matsoukas**, head, Reference, and Education Coordinator; **Marina Chilov**, monograph collection development and reference librarian; **Tracy Allen**, head, Access Services; **Nighat Ispahany**, reference and media librarian; and **Elaine Zimbler**, reference librarian; Augustus C. Long Health Sciences Library, Columbia University Medical Center, New York, NY

Objective: To illustrate how updating the method of statistics taking at an academic medical center's library to one of higher temporal and demographic resolution of information, by adopting a business-style information technology (IT) solution, may better serve its reference department in analyzing user needs and in evaluating reference services.
Methods: To facilitate the taking of more informative and comprehensive statistics, our institution's Web librarian developed a Web-based database tool, inspired by traditional IT support-tracking systems. Built on a business model, this new "Patron Encounter Tracking System" counts every patron encounter, gathers demographic information (department/school and affiliation/status) about the patron, and documents the length and nature of the encounter, similar to the degree of tracking one would require if the service were to be billed. During a four-month period, reference librarians were required to enter information about every reference transaction, using the Patron Encounter Tracking System. Parallel to this method of data collection, a reference statistics sheet was also used to collect reference statistics on a sampling basis, during a predesignated one-week period, once per month. The two methods of collecting reference statistics were then compared and evaluated.
Results: The biggest obstacle faced in this project was the low level of initial librarian buy-in to the Encounter System (ES). Only half of the librarians on staff were conscientious about using the ES on a daily basis. As a result, the total number of recorded reference inquiries was higher using the "manual" sampling sheet method. Of the 1,262 inquiries that were recorded using the ES, 60% involved research assistance or instruction, while 27% were "directional" questions. It was found that these inquiries took 105 librarian reference hours to answer, 41 hours of which were spent with students, 24 hours with medical students specifically.
Conclusions: ES facilitates statistics-taking and analysis: Preliminary ES data demonstrated its potential to inform operational improvements and to answer management-type questions (% of inquiries that paraprofessionals could handle, reference hours spent per school, etc). Data entries are not made automatically, however; its success depends largely on the degree of commitment made by librarians to use it.

Diabetes Information and Internet Skills in the Community-based Participatory Library Program of the REACH 2010 Charleston and Georgetown Diabetes Coalition

Barbara A. Carlson, AHIP, REACH 2010 librarian; **Beverly Highland**, REACH 2010 community health advisor; and **Florene Linnen**, REACH 2010 librarian; Reach 2010, Medical University of South Carolina–Charleston; **Kim Odom**, chairperson, Cultural Diversity Task Force, Young Adult Services, Charleston County Public Library, Charleston, SC; **Marilynn Robb**, library manager, Andrews Branch Library, Georgetown County Public Library, Georgetown, SC; **Gerald B. Moore**, library manager, and **Sheila Matthews**, circulation supervisor, Cooper River Branch Library; and **Rayburne Turner**, reference librarian, Otranto Regional Library Branch; Charleston County Public Library, North Charleston, SC; and **Darlene Jackson**, library manager, Johns Island Regional Library, Charleston County Public Library, Johns Island, SC

Objective: The majority of US consumers search the Internet for health issues. However, African Americans who are over sixty years of age or who have less than twelve years of education and suffer disproportionate rates of diabetes and related complications in South Carolina are not typically connected to networked resources. This presentation shows how five rural communities are addressing this health disparity.
Methods: A steering committee, using a community-based participatory action research approach, aims to increase use and knowledge of Internet and library resources by providing access at neighborhood sites, engaging librarians in community-based teaching, tailoring teaching methods to community needs, and linking participants with recommended diabetes resources. This partnership of the faith community, public libraries, grassroots diabetes advocacy groups, community centers, information technology (IT), diabetes supply companies, and lay community diabetes advisors taps community assets to build capacities and find sustainable solutions to filling information gaps. Discussion includes documenting training activities, designing a questionnaire to evaluate educational programs and resources, and creating a Website with the faith community to help people manage diabetes. This presentation reports lessons learned and actions taken in this participatory process, which will serve as a model for using health IT and innovation in community diabetes education.
Results: Four steering committee meetings during the first six months of the project had good participation (66.6%) by partner representatives, yet progress was often tied to external factors outside the control of the committee. Challenges in establishing technical support in the community, essential to sustainability, delayed Internet installation and training at community access sites. Establishing a three-phase training curriculum, responsive to the needs of users at five diverse community sites, required extra time and planning by library partners but was an important step. Changes in community and university organizations, between project planning and implementation phases, influenced processes and outcomes.
Conclusions: Community-driven health IT projects, planned through collaborative partnerships, face changes and challenges at many different levels. Added work and time are essential to ensuring mutually shared responsibilities and benefits.

Building Self-directed Learning Skills in Pharmacology Through Collaborative Problem-based Teaching

Irena Bond, librarian, Blais Family Library; **Alice Gardner**, assistant professor, Pharmacology/Toxicology, Department of Pharmaceutical Sciences; and **Mariana Lapidus**, Librarian, Sheppard Library; Massachusetts College of Pharmacy and Health Sciences–Boston

Objective: The objectives of this study are to discuss the approaches for building self-directed learning skills (SDLS) in pharmacology, to describe this process in the context of a problem-based learning (PBL)/evidence-based medicine (EBM) environment, and to evaluate the importance of a successful faculty-librarian collaboration.
Methods: Self-direction in learning is an important skill needed by pharmacists to maintain competence by continuing to learn throughout their careers. In a faculty-librarian collaborative environment, PBL and EBM are used as teaching and learning methods for building SDLS. Students are separated randomly into small groups and are given real life cases for each module. Problems are solved in teams and presented to class. Faculty members and librarians are collaborators and serve as facilitators to students. Students' SDLS are assessed throughout the course using the Self-Directed Learning Readiness Scale (SDLRS). The Self-Directed Learning Perception Scale (SDLPS) is used to moni-

tor the support of the self-directed learning environment. Progress in acquiring SDLS is determined to evaluate the impact of the methods used.

Results: During the ten-week course, fifteen students randomly assigned to four groups solved four pharmacological cases using PBL and EBM methodology. The professor and the librarian in collaboration facilitated the groups and individual students during problem solving and information seeking sessions. Groups worked as a team and presented their case results and research strategy every two weeks. The Guglielmino's SDLRS was administered at the end of the course to compare the results with normed information and to draw future learning approaches in teaching self-direction in pharmacology.

Conclusions: In the context of the faculty-librarian collaboration and facilitated teaching as well as the enhanced learning through PBL and EBM methodology, students' SDLS in pharmacology were assessed and future self-directed teaching approaches were determined.

25

Information Needs among Genetic Counselors

Will Olmstadt, AHIP, education librarian, Library, University of Texas Southwestern Medical Center–Dallas, and **Margaret Anderson**, graduate assistant, Library, School of Public Health, University of Texas–Houston

Question: Faced with collection decisions that impacted genetic counselors, how can the library continue to best serve their needs?

Setting: Large urban academic medical center and its library.

Method: Recent electronic resource cancellations impacted some genetic counselors. The library's outreach unit took the lead in finding alternative resources for these clients. This was an excellent opportunity to investigate the information needs of these clients and use those data to develop classes tailored to their needs. Some counselors had already contacted the library, and others were targeted using human resources contacts, campus directories, and word of mouth.

Main Results: Eight clients were identified. Five participated in tailored educational activities offered by the library. Genetic counselors in this environment do not comprise a uniform profile. They have different titles in different departments, work in different locations, and have variable amounts of time to counsel patients and research conditions. They require resources beyond MEDLINE, including smaller databases developed in other countries, of which many libraries may not be aware. These counselors were also eager to investigate automated alert services. Additionally, they offered valuable feedback on the collection.

Conclusion: With increasing national emphasis on the hereditary basis of disease, libraries should be aware of the needs of genetic counselors and strive to support them. Engaging these professionals and documenting their feedback positions the library to serve them better.

27

Health Sciences Librarians and Health Information Literacy

Neil Rambo, acting associate director, Health Sciences Library, University of Washington–Seattle

Objective: To determine health sciences librarians' awareness of and/or involvement in health information literacy issues and activities. Also, to determine the effect, if any, of MLA's health information literacy (HIL) initiative on librarian awareness and/or involvement in the issue.

Methods: Part of the HIL Task Force's charge is to establish a framework for evaluating the effectiveness of MLA's HIL work. The task force will gather data from both MLA and MLA chapter members about the members' awareness of and/or involvement in health information literacy issues and activities and determine if and how MLA's initiative in this area has assisted members in their efforts. If members are unaware of MLA's initiative or it did not asisst them, the survey

results will provide information about additional actions that MLA can take. The MLA HIL Web page includes such resources as a bibliography, a communications plan, advocacy toolbox cards, and links to continuing education in this area. Data will be gathered by means of an electronic survey sent to both MLA and MLA chapter members.

29

Consumer Health Information Provided by Hospital Websites in Louisiana

Dee Jones, AHIP, head, Cataloging, Medical Library, Louisiana State University Health Sciences Center–Shreveport

Objective: To survey Louisiana hospital Websites to determine if consumer health information (CHI) is present. Review the CHI and identify the source. Evaluate accuracy, currency, quality, and disclosure of sponsorship.

Methods: Identify which of the 234 inpatient hospital facilities in Louisiana have a Website. Website presence will be correlated with specific demographic factors: number of beds, health care system affiliation, type of administrative control, urban/rural setting, etc. Sites with CHI will be analyzed to determine the number and type of internal and external links. The sponsorship of external links will be categorized as to government, nonprofit, educational institution, or commercial. A list of all CHI external links in each hospital Website will be compiled. This list will be compared with MLA's "Top Ten" most useful Websites.

Results: Two hundred thirty-four hospital facilities were surveyed to determine which have Websites and, of those with Websites, which provide CHI. Of the 234, 139 have a Website, but only 78 (or 33%) of those provide CHI. While 65 of the sites have a prominently displayed privacy statement, only 10 sites require the user to state that they have read the disclaimer before proceeding, and 4 sites require the completion of a free registration form. Hospital Websites were also examined to determine if external links are made to MLA's "Top Ten" most useful Websites. The Centers for Disease Control Website is the most frequent, with links from 17 hospitals. Medline Plus and KidsHealth are next, with 14 and 13 links respectively. Additional results will be discussed during the poster presentation.

Conclusions: Since only 59% of the hospitals surveyed have a Website, and of those, only 56% provide CHI, it is concluded that the provision of CHI is not an overriding priority for Louisiana hospitals. But, the CHI that *is* provided is, for the most part, commercially produced, accurate, and current. Another factor is that the surveyed hospitals have a low incidence of providing links to sites deemed most useful by MLA. This fact should prompt MLA to make health care providers aware of their numerous educational products and services.

31

Tapestry of Life: Training Public Librarians to Find End-of-Life Resources

Deborah D. Halsted, associate director, Public Services and Operations, Library, Houston Academy of Medicine-Texas Medical Center, Houston, TX; **Carolyn Harty**, reference librarian, Library, Kingwood College, Kingwood, TX; and **Teresa Petrucci-Coley**, coordinator, Gulf Coast Partnership for End-of-Life Care, Texas Partnership for End-of-Life Care–Houston

Objective: To assess the needs of public librarians and to train staff at Harris County Public Library (HCPL) to find resources on end-of-life issues.

Methods: Through grant funding from the National Network of Libraries of Medicine South Central Region, train-the-trainer courses were taught at three HCPL facilities, with librarians from eight public library systems attending. Pretests were mounted on the course registration site so that baseline data could be established. The pretest included: demo-

graphic data on the librarians themselves, information on the number of end-of-life questions asked in public libraries, current awareness of resources, understanding of issues and terminology, personal biases about talking about death, and understanding of cultural differences on this topic. The same questions were offered as a posttest following each session.

Results and Conclusions: There were 44 respondents to the pretest, 39 class attendees, and 29 completed posttests. Tests showed that public librarians are aware of the need of resources for end-of-life questions, there is a general unease with this type of question, but their knowledge of resources increased by a large amount in the posttest.

Future: The project participants will help HCPL market the new skills learned in the classes, create a course template (mounted on the TxPEC Website) to be used by others in Texas, offer the course to nonlibrarians, and publish the findings locally, regionally, and nationally.

33

Collaboration Center Planning and Development in an Academic Health Sciences Library

Margaret E. Moore, director, Planning; **Wallace McLendon**, deputy director; and **Carol G. Jenkins, AHIP, FMLA**, director; Health Sciences Library, University of North Carolina–Chapel Hill

Objective: Fostering innovation in scientific discovery, teaching, learning, and professional practice through an interdisciplinary collaboration center in the academic health sciences library. The ultimate goal is discovery of new knowledge and new ways of transmitting knowledge. Establishing a library collaboration center provides another opportunity to demonstrate the library's value as an essential partner in managing knowledge to advance health.

Methods: Creating the center is a collaborative planning process. A team of librarians with staff in similar centers across the country and campus advisors are defining the collaboration center services, spaces, technologies, and policies. Librarians systematically meet with key stakeholders to assess needs and promote the value of the library as host. With advice from these contacts, librarians identify potential users and generate support from stakeholders. Plans for the center include a high-resolution 8x16-foot visual display wall and Access Grid 2.0 for high-quality audio and real-time video for interactive communications between users at multiple sites via high-speed Internet2 networking. Initial and ongoing funding will come from a combination of sources: campus, library, grants, and fees for service. Evaluation will be tied to the program logic model developed in the initial planning. Poster will include pictures of the high-resolution display wall and other collaboration technologies, library team, key partners, and graphical displays of the planning process, program logic model, and results/outcomes to date.

35

The PubMed Help Online Book: Digital Publishing with the National Center for Biotechnology Information Bookshelf

Jeffery Loo, associate fellow; and **Mohammad Al-Ubaydli**, visiting research fellow; **Jo McEntyre**, staff scientist; and **Kathi Canese**, librarian; National Center for Biotechnology Information; National Library of Medicine, National Institutes of Health, Bethesda, MD

Objective: The popular PubMed database offers rich functionality for searching the medical literature. PubMed is regularly searched by over 500,000 users each day. This project created a more usable help system for PubMed by editing the instruction manual and then digitally publishing the manual as a searchable online book.

Methods: The existing hypertext markup language (HTML) manual was improved in the following ways:

• The manual was edited to provide user-friendly answers to common PubMed searching questions.
• Instructions are provided in note-point form for easier online reading and referral.
• Search examples are linked to live PubMed searches for demonstration.
• Instructional graphics concisely explain the PubMed interface and some of its complex functions.
• The needs of different levels of users were addressed. Advanced skills are explained in supplemental sections for advanced users. For the new user, a quick start guide provides short introduction to the basics of PubMed searching.
• The PubMed database will be linked to the help manual in a context-specific manner.

The manual was then converted into extensible markup language (XML) format. The digital publishing system generated the online book to include powerful search, organizational, and navigational features. A portable document format (PDF) copy for printing was also generated.

Results: The first draft of the help manual has been written. The infrastructure is in place for continuous editing, searching, and contextual hyperlinking from different parts of PubMed. Upon full publication, the manual will be regularly updated alongside developments in the PubMed database.

Conclusions: The PubMed Help Online Book will be the prototype for the future development of searchable, XML-based, online help manuals for National Center for Biotechnology Information (NCBI) resources.

37

So Many Vendors, So Little Time

Linda J. Bennett, chief librarian, Library, Richard L. Roudebush VA Medical Center, Indianapolis, IN; **Mary V. Taylor**, chief librarian, Library, VA Medical Center, Memphis, TN; **Diana F. Akins**, chief, Library Service, Library, Bay Pines VA Medical Center, Bay Pines, FL; and **Nancy A. Clark**, chief, Library Service, Library, VA North Texas Health Care System, Dallas, TX

Objective: Rather than just an opportunity to practice "Adult Trick or Treating," vendor exhibits offer a unique opportunity to learn and/or enhance skills. Both vendor and attendee have the opportunity to focus on needs, think about what is currently being done and how well it works, consider possible changes, explore what is on the horizon, and obtain feedback.

Methods: Our poster reviews the expectations of the vendors and what knowledge they hope conference attendees will walk away with from their exhibits. We solicited input from both librarians and vendors about their expectations for the exhibits and contacted MLA to review the responses to the portion of the MLA '04 meeting evaluation related to exhibits.

39

Comparing Bedside Information Tools : A User-centered, Task-oriented Approach

Rose Campbell, National Library of Medicine fellow, Department of Medical Informatics and Clinical Epidemiology, and **Dolores Judkins, AHIP**, head, Research and Reference Services, OHSU Library, Oregon Health & Science University–Portland

Objective: To compare several bedside information tools using user-centered, task-oriented measures in order to provide a tool for those making or supporting purchasing decisions between products.

Setting/Subjects: The Oregon Health & Science University Libraries are academic health sciences libraries serving a diverse clientele of students and clinicians. Study participants will be drawn from this clientele and may include pharmacists, physicians, medical students, resi-

dents, physician assistants, nurses and other health care practitioners.
Methods: Users will be asked to answer ten clinical questions using a variety of bedside information tools. Users will evaluate each tool for ease of use and user satisfaction. This user-based information will be combined with information gathered from direct examination, such as currency, coverage, and subscription information.
Anticipated Results: It is anticipated that different classes of users, such as residents or nurses, may prefer different bedside information tools.
Conclusion: To select a product that will satisfy users, it is essential to consult with primary users of the product. User-centered evaluations are needed to make an informed purchasing decision.

41

Using Blogs and RSS for Integrated Library Information Channels

Edward Roberts, head, Information Systems, and **Terry Ann Jankowski, AHIP**, information management librarian, Health Sciences Libraries, University of Washington–Seattle

Objective: Describe how open-source blogging software can be used to generate various library information channels and how the content of those channels can be repurposed for email alerts and through syndication onto library Web pages. This effort offers end users the choice of how to receive information, potentially increases the number of recipients, and renders the librarian's time more efficient.
Methods: We traditionally used mailing lists to disseminate library announcements. We are experimenting with using blogs to publish this information. Blogs expose content in RDF Site Summary (RSS) extensible markup language (XML) metadata format, which can be consumed and reused by other applications. In our case:
1. scripts periodically email blog content to mailing lists
2. customized Java code syndicates the content into our Website
3. desktop RSS news-readers
The intended result is librarians can efficiently and, in a single place, enter news content, which will automatically be reused in multiple channels, thereby offering end users consumption choices and potentially increasing our audience. We expect librarian time spent in this dissemination process to decrease. We intend to survey our end users, to see if offering information in multiple formats increases the number of readers and awareness of library news.
Results: Using Movable Type 2.6 and third-party feed-parsers (Feed2JS: <jade.mcli.dist.maricopa.edu/feed/>; MagpieRSS: <magpierss.sourceforge.net>), we have demonstrated that our news pages can be populated in this manner. However, developing a satisfactory display has yet to undergo usability testing. The built-in notification feature in Movable Type will allow us to send out this information to selected mailing lists, utilizing a customized template, but we have not yet used this feature in production. The librarian responsible for content has found it easy to enter information with the greatest challenge being categorizing the entries.
Conclusions: Although this is still in development, we are optimistic that writing the information only once and using the features of the blogging software to create both Web pages and email alerts will prove to be a definite time saver for library staff. Next steps include usability testing, rolling this service out from development to production, and offering end users the choice of receiving email or news feeds.

43

Growing Our Own: Mentoring Staff to Become Future Librarians

Catharine S. Canevari, head, Education and User Services, Tompkins-McCaw Library; **Yuki Dixon**, archival assistant, Special Collections, and **Mark A. Elliott**, library specialist II, Research and Reference,

VCU Libraries; **Heather Enderle**, service desk assistant, User Services Department; **Shannon D. Jones**, education services outreach librarian; **Joel B. Lammers**, evening stacks assistant, Collections; and **Susan J. Phipps**, library specialist 1, User Services; Tompkins-McCaw Library; **Jean P. Shipman, AHIP**, director, Tompkins-McCaw Library, and associate university librarian, VCU Libraries; and **Alan T. Williams**, evening and weekend stacks supervisor, Resource and Operations, and **Barbara Allen Wright, AHIP**, reference services librarian, Tompkins-McCaw Library; Virginia Commonwealth University–Richmond

Objective: This poster describes our library's mentoring activities to encourage support staff to pursue careers in library and information science.
Methods: In a state without an accredited library science programs, future librarians attend distance education or out of state library school programs. When a number of library staff expressed interest in library school, an interest group was formed that expanded to include internal staff, staff from our other campus library, and area students from distance-education library science programs. Librarians met informally with group members to offer encouragement, share information, compare programs, and discuss options regarding career and library school programs, course selection, and financial concerns. Blackboard Learning System software was used to facilitate discussion and information sharing. Encouragement and support was given to staff to join professional organizations and attend local chapter meetings.
Results: The interest group invited everyone to attend three meetings held over a period of six months. Feedback was solicited from attendees to help better meet their needs. Barriers including time constraints from work schedules, day care, and other responsibilities prevented members from actively participating in the onsite meetings. A discussion and resource sharing space was created using Blackboard. Feedback was solicited to improve the Blackboard site, and all "course members" were given access permitting them to add or remove content as needed. A lack of familiarity with Blackboard and difficulty creating Blackboard accounts for nonaffiliates prevented Blackboard from becoming a catch-all solution.
Conclusions: This group arose from a desire to provide mentoring to staff interested in graduate school options and expanded to include non-staff as interest was expressed. Expressed needs of members differ greatly for each person. We will seek feedback to assess the success of the group and make adjustments as needed.

45

The Big Deal: Is It a Bad Deal After All?

Rajia C. Tobia, AHIP, associate library director, Collection Development; **Andrea N. Schorr**, collection development library assistant; and **Jude A. Lynch**, collection development library assistant; Library, University of Texas Health Science Center–San Antonio

Objective: Is the Big Deal bundling of electronic journals, originally described by Kenneth Frazier, director of libraries at the University of Wisconsin–Madison, a bad deal? Or is it a good deal for an academic health sciences library that participates heavily in consortium-based electronic journal subscriptions?
Methods: To determine if the library receives significant value through its participation in consortium subscriptions for bundled electronic journals, we collected 2004 use data for journals in three publisher packages. The electronic journal packages examined were Blackwell Synergy Science and Medicine Collection, Elsevier ScienceDirect, and Wiley InterScience. Journal titles that were used 100 times or more during the year were examined to see if the library received the titles as a result of participation in a bundled consortium package or if the library maintained a subscription to the title. We calculated the subscription costs for those titles not subscribed to by the library but accessible because of the bundled journal packages. We then determined the cost

to the library should it discontinue the bundled packages and subscribe to the titles independent of consortium participation.

Results: The number of article views numbering 100 or more from journals not historically part of the library's subscription base were as follows: Blackwell Synergy STM collection: 65 titles, 14,500 articles, $56,350 subscription value; Elsevier ScienceDirect: 212 titles, 67,900 articles, $393,400 subscription value; Wiley Interscience: 16 titles, 27,596 articles, $64,997 subscription value. The potential subscription cost using 2005 prices for the titles viewed 100 times or more from the three publishers' collections is $514,747. In comparison to the potential subscription costs, the actual costs for the library to continue participating in bundled consortium packages is insignificant.

Conclusions: We found that participation in a consortium extends the value of subscription expenditures by increasing the number of journals available to our clientele. While some journals are likely to be used infrequently or not at all, those that have significant use constitute a potential subscription cost that makes it worthwhile to continue consortium participation, despite the bundling of electronic journals.

47

Fast Track to the Academy of Health Information Professionals (AHIP): You Can Be a Winner!

Robin Insalaco, outreach librarian, Watson W. Wise Medical Research Library, The University of Texas Health Center–Tyler; **Debra Warner, AHIP**, librarian V and director, Community Outreach, Center for South Texas Programs, The University of Texas Health Science Center–San Antonio, Harlingen, TX; and **Terry Ann Jankowski, AHIP**, information management librarian, Health Sciences Libraries, University of Washington–Seattle

Objective: Illustrate how Credentialing Committee liaisons from different chapters collaborated on a poster to promote membership in the Medical Library Association's peer-reviewed, professional development, and career recognition program, the Academy of Health Information Professionals (AHIP).

Methods: Credentialing Committee liaisons from two distant MLA chapters collaborated by telephone and email to develop a poster for display at their regional conferences. The authors wanted to develop an eye-catching poster that would graphically represent the steps to be taken by individuals to earn their academy credentials, while at the same time offering encouragement and stressing that this process should be considered enjoyable as well as worthwhile. The concept of a game board was chosen to illustrate the course and milestones for the academy membership levels. Using PowerPoint software, the liaisons created a poster that could be printed in multiple sizes for display at meetings, plus be available to send to others interested in using it. Portions of the poster with chapter-specific information can easily be changed to adapt it for use at different locations.

Results: Two customized versions of the poster were printed, reflecting local chapter information and display size requirements. Handouts of the poster were prepared by both liaisons for disbursement at their respective meetings. Response to the poster from attendees at the annual South Central Chapter meeting was very positive. Traffic for the poster was brisk, and comments made indicated individuals were attracted by the game board presentation and were delighted and often surprised at how manageable the steps and point accumulation were for academy membership.

Conclusions: Benefits from this project were twofold. The poster fostered inter-chapter communication and networking with the potential for participation by other chapters, who may want to customize the poster for their own marketing. Also, and perhaps more importantly, it provided a visually appealing argument for the attainability of academy membership. Most individuals are more qualified to play this game than they knew!

49

Using the Performance Analysis Process to Improve Patient Education Projects

Marcy L. Brown, AHIP, medical librarian, Health Sciences Library, Forbes Regional Hospital, Monroeville, PA

Objective: Describe how the hospital librarian used performance analysis techniques to identify weaknesses in the inpatient diabetes education program and determine opportunities for staff educational interventions. The purpose of the analysis was to outline the optimal patient educational experience in comparison to the actual, determine causes for the variance, and recommend solutions to help achieve optimal diabetes education.

Methods: The analysis took place at a 300+-bed suburban community hospital that admits many patients newly diagnosed with diabetes each year. Any registered nurse (RN) or licensed practical nurse (LPN) working on an inpatient floor could be called upon to teach a new diabetic. Realistically, about 200 nurses staff the three units with the greatest likelihood of housing these patients and were the focus of the performance analysis. Analysis included the following:

1. Stakeholder interviews with nurse managers and a nurse educator; interviews were approximately twenty minutes each and contained a series of focused but open-ended questions
2. A literature search to identify best practices in inpatient diabetes education
3. An informal audit of the medical charts of all newly diagnosed diabetics during a specified, three-week period.

Results: Actuals showed that education worksheets are vague and visually cluttered; diabetic education is not provided until the day of discharge; physician ancillary orders are rarely initiated; education is performed all at once, creating information overload; and nurses received little education on how to teach diabetics.

Conclusions: Barriers to optimal patient education encompass several performance factors, including nurse skills and knowledge, constraining environmental factors, low motivation, and lack of organizational support. Recommendations include additional training for nurses, form and education kit redesign, and standardization of several procedures.

51

Medical Information at the Point of Need: Technology Education to Encourage Clinical Uses of Personal Digital Assistants (PDAs)

Patricia W. Martin, head, Electronic Systems, and **Theresa S. Arndt**, head, Outreach Services, Taubman Medical Library; **Helen Look**, collection management coordinator, Public Health Library and Informatics; and **Gurpreet Kaur Rana**, clinical librarian, Taubman Medical Library; University of Michigan–Ann Arbor

Objective: This poster will report on classes taught on the use of personal digital assistants (PDAs) to promote their use at the point of care.

Methods: Librarians of an academic medical library were granted a Technology Improvement Award from the National Network of Libraries of Medicine to promote the use of PDAs for accessing care-related information. Seven each PocketPC and Palm wireless PDAs were purchased. These machines were used to teach hands-on classes to health system personnel. Two types of classes were offered. An exploratory session guided attendees through several exercises on each platform. They also used medical information resources on each platform, giving them the opportunity to gain experience with the operating system and compare display features and feel. The second of class was taught in two versions, one crafted for Palm users, one for PocketPC users. Attendees installed the desktop software, downloaded software and documents, and used medical information resources on their platform of choice.

53

Outstanding Outreach: Building Relationships with Your Community

Becky Hebert, specific populations outreach coordinator, National Network of Libraries of Medicine Southeastern/Atlantic Region, University of Maryland–Baltimore; **Siobhan Champ-Blackwell**, community outreach liaison, National Network of Libraries of Medicine MidContinental Region, Creighton University, Omaha, NE; and **Roy Sahali**, community resources coordinator, National Network of Libraries of Medicine Pacific Northwest Region, University of Washington–Seattle

Objective: Is there an effective approach that can be used to provide access to health information to communities that are traditionally underserved, specifically people of color and low-income populations?
Methods: The National Network of Libraries of Medicine (NN/LM) has as part of its mission "improving the public's access to information to enable them to make informed decisions about their health." Four of the Regional Medical Libraries of the NN/LM have designated outreach librarians who focus on outreach to underserved populations. These librarians have determined best practices in discovering community needs as well as in providing culturally competent services.
Results: Four strategies can be developed at the regional and local level to engage community organizations: networking, community-based organization (CBO) intermediary pass through, training collaboration, and organization partnerships. From a visit to a homeless shelter to present a basic overview of resources to a project with *promotoras* who reach out to families living in the border towns of Texas, we will show examples of projects that have built trust and commitment between medical librarians and their community.
Conclusions: Each strategy can be considered a step toward developing trust with CBOs, as each builds upon the next level of deeper involvement and commitment from both sides. We have developed successful outreach with a wide variety of groups that run from a one-time visit to years-long programs.

55

Evaluating NC Health Info: Lessons Learned for All Go Local Sites

Christie Silbajoris, AHIP, NC Health Info project director; **Diana McDuffee**, North Carolina Area Health Education Center Library and Information Service Network director; **Margaret Moore**, director, Planning; **Rachel Wilfert**, outreach librarian; and **Brian Hilligoss**, applications developer librarian; Health Sciences Library, University of North Carolina–Chapel Hill

Objective: To evaluate the effectiveness, usefulness, and value of the provision of online health information in combination with customized local health services information.
Methods: The program logic model (PLM) was used to plan an evaluation of a prototype Website designed to provide users with general health information as well as information about local health services that could assist them with the treatment or management of diseases or other medical conditions. The evaluation was designed to determine who uses the Website, their degree of satisfaction, the usage of the local health services' Websites, users' plans for the information they find, the value of the combination of the two types of health information, and the efficiency of the cataloging and records maintenance process. Methods implemented include two user surveys, Web log analysis, expert reviews of depth and breadth of content, analysis of user contributed comments, questions and suggestions, and usability testing of the cataloging system.
Results: Evaluation results are providing baseline data so that the PLM can be used for continuous quality improvement. The survey results

provided a small sample that indicated overall satisfaction with the site and recognition of the value of health information combined with local services information. Additional surveys may be implemented next year in order to gather a larger response. A prototype expert review for breadth and depth was designed and tested and will be implemented next year as well. The site was reviewed in terms of health information literacy by two experts in the field, one an adult learner. Overall, the site was found to satisfactorily meet the needs of people with low literacy skills. Usability testing of the cataloging input system determined that the current method was the easiest, most efficient one for expert and moderate catalogers. Further evaluation of the cataloging and maintenance system is planned for next year.
Conclusions: The evaluation conducted this year gathered baseline data regarding users' attitudes toward the site, recognition and usage of the local health services information, and usability of the cataloging system. Ongoing evaluation will continue to provide information to be used for continuous quality improvement.

57

Building for Tomorrow: A Community Information Needs Assessment

Kathryn Hoffman, AHIP, executive director, Research Medical Library, University of Texas M. D. Anderson Cancer Center–Houston

Objective: To determine the needs of faculty and students to support their work, to determine faculty and student use of online journals and databases, and to identify barriers to acquiring information from the Research Medical Library.
Methods: Methodology: Individual user surveys.
Setting/Participants: Research Medical Library, University of Texas M. D. Anderson Cancer Center; clinical faculty (637), research faculty (480), residents/fellows (180), and students in the School of Health Sciences (57) and the Graduate School of Biomedical Sciences (400).
Results: Respondents indicated 3 major reasons to use the library: research topics (84.4%), preparing a talk or paper proposal (72.1%), or study (54.3%). The least likely reasons to need the library were: provide patient education (5.2%), research an administrative/managerial subject (8.9%), or attend a library-sponsored class (14.6%). Respondents reported their typical locations for accessing online resources available through the Research Medical Library as in their office (85.3%), at home (50.5%), in their labs (45.7%), or in the library (37.8%). The majority of respondents identified online databases (88.6%) and online journals through the Research Medical Library (85.5%) and colleagues, experts, or researchers at M. D. Anderson (58.0%) as primary sources of information for a clinical or research projects. Almost 92% personally search online databases. Those accessing MEDLINE usually used the PubMed interface (70.3%) or Ovid MEDLINE (21.5%). The greatest barrier to acquiring information from the Research Medical Library was geographic isolation (25.7%). Other barriers cited were lack of online resources (19.5%), hours the library is open (13.6%), and document delivery delays (10.1%).
Conclusions: Results of the survey suggest that the needs of the users of the Research Medical Library are being met. The results will guide library staff in addressing the issues of its user community.

59

Extreme Makeover: Library Edition: Revitalizing Resources and Services at the Centers for Disease Control and Prevention (CDC) Information Center

Nancy Pulsipher, NLM associate fellow, Second Year, and **Susan L. Clemmons**, ORISE fellow, CDC Information Center, Centers for Disease Control and Prevention, Atlanta, GA

Objective: To describe how the Centers for Disease Control and Prevention (CDC) Information Center (IC) is responding to developments and trends in the CDC by providing new and expanded services.

Methods: In order to prepare the CDC IC for its new role, changes in the areas of collection management, new technologies, and expanded service models are under way. The following three areas will be highlighted:

• Collection management: electronic resources, an emerging consumer health collection, and consolidation of a previously disparate collection
• New technologies: SFX, Voyager catalog, and Illiad
• New service models: new user groups, in-reach services and training, e-document delivery, and an emerging informationist program

The poster will demonstrate how these changes are preparing the CDC IC for its expanded mission.

Results/Conclusions: Through significant changes, expansions, and improvements, the CDC IC is positioning to meet its expanding role as a public health information service for the CDC, the broader public health community, and the public.

61

Where's Your Evidence? Designing and Creating an Interactive Evidence-based Medicine (EBM) Tutorial

Linda C. O'Dwyer, education librarian; **Stephanie C. Kerns**, education librarian; **Mark Berendsen**, education librarian; and **Jim Brucker**, education librarian; Galter Health Sciences Library, Northwestern University, Chicago, IL

Objective: Objectives were: to create an interactive evidence-based medicine (EBM) tutorial consisting of modules that could be taken as needed and as time allowed, to support residents' Accreditation Council for Graduate Medical Education (ACGME) information competencies and the EBM components of the medical students' curriculum, to build on multimedia skills we acquired while creating our PubMed tutorial, and to develop technological proficiencies with software such as Flash and Camtasia.

Methods: Busy clinicians have little time to take formalized evidence-based medicine training and are often forced to pick up EBM skills in a haphazard and unsystematic fashion. With this in mind, we designed our EBM tutorial to be interactive and available at the user's point of need, with the content outlined in a linear and organized manner. Each module can be taken independently and later modules should reinforce knowledge already acquired either in or outside the tutorial. Content to be covered includes: background to EBM, framing the clinical question, EBM resources, searching for EBM literature, evaluating information, a glossary, and a bibliography. The modules will be a combination of hypertext markup language (HTML) documents (information), Camtasia video clips (demonstration examples), and Flash movies (interactive exercises), with immersive interactivity prominent throughout. Important concepts in EBM will be highlighted using interactive links, and feedback will be provided as the user moves through the tutorial.

Results: While our previous experience with creating a PubMed tutorial provided us with invaluable knowledge in creating an interactive online tutorial, the design and creation process for the EBM tutorial was very different. This was primarily due to the need to cover large amounts of material and the difficulty in encapsulating the EBM concept into instruction-friendly pieces. It has also been a challenge to mesh the multiple technologies needed to deliver the information. We are overcoming these obstacles as testing of section prototypes begins.

Conclusions: Have a detailed plan and set aside plenty of time for planning, designing, testing, and redesigning. No one technology fits all: be prepared to work with multiple technologies to convey your message. Finally, test early and test often!

63

Evaluation of Two National Network/Libraries of Medicine (NN/LM) Programs Designed to Improve Access to Online Health Information

Greg Bodin, AHIP, technology coordinator, National Network of Libraries of Medicine South Central Region, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX

Objective: Our objective was to evaluate the effectiveness of the Library Improvement Project (LIP) and Internet Connectivity Project (ICP) in achieving the goal of improved access to health information and to identify areas of improvement for the programs. The LIP and ICP are two programs in the National Network of Libraries of Medicine South Central Region (NN/LM SCR).

Methods: The LIP and ICP are designed to improve access to online health information in hospitals, libraries, and other organizations. Participating project sites receive a computer, fax machine, printer, Internet connectivity subsidy, training, and a document delivery subsidy for the LIP. A questionnaire was mailed to contacts at participating project sites (38) in the current NN/LM contract (the last three years). A reminder was sent by email (or fax in the case of email bounce-backs). The questionnaire was designed to assess the impact of the project on information retrieval, the impact of the project on perceived user competence, the relative usefulness of each project component in achieving the project goals, and to identify challenges to the achievement of project goals.

Results: A response rate of 60% (23 of 38 sites) was achieved. Questions regarding the original justification for funding of these projects were well-supported in the responses. For example, all reporting sites stated that the project had an impact on use of the Internet for accessing health information and, in particular, National Library of Medicine resources. Also, fourteen sites that reported no Internet access before the project no longer reported this issue after project completion. An interesting result was the even breakdown of computer users. The sites reported a variety of users, including physicians, nurses, librarians, consumers, and allied health professionals. No one group was significantly larger than any other, demonstrating the varied users of health information.

Conclusions: Quantitative and qualitative questionnaire responses show that the LIP and ICP projects have been a success. Access to the Internet for searching health information has been improved in the NN/LM SCR. Much valuable information was gathered about specific aspects of the project that will be used in planning for future equipment projects.

65

Out of the Library: A Proactive Approach to Marketing Library Services to Patients' Families and Staff

Karen L. Keller, AHIP, director, Library Services; **Lynne Harmon**, library assistant; and **Dena Hanson, AHIP**, librarian; Edwin G. Schwarz Health Sciences Library, Cook Children's Medical Center, Fort Worth, TX

Objective: To determine if a proactive outreach program of visiting nine in-patient units on a weekly schedule would increase the number of consumer health information requests from families, physicians, and staff members. Questions explored include "Which units are using our services?" and "How do families and staff find out about the resource center?"

Methods: Before implementation, statistics were kept on all families visiting or calling the family resource center at our pediatric tertiary hospital. Staff requests for consumer information for families were also tracked. The library staff then implemented a formal outreach program to nine in-patient units. Each unit was assigned a visit day. Each newly

admitted patient was visited by the library staff and provided with written and verbal information about the family resource center. Library staff tracked family requests based on which unit they were from and how they found out about the family resource center: pre-intervention outreach, post-intervention outreach, or staff referral. The results of the outreach program will be evaluated to see if this method of proactive outreach to families, staff, and physicians can make a difference in usage and referrals for the family resource center.

Results: The results of twelve months of outreach are presented.

Conclusions: Library staff findings and insights of what was learned will be presented. Staff thoughts about building relationships with physicians and staff will also be explored.

67

How Is Gene Function Information Cited in Published Reports of Microarray Experiments?

Timothy B. Patrick, assistant professor, and **Lillian C. Folk**, predoctoral fellow, Health Management and Informatics, University of Missouri–Columbia

Objective: Understanding the information practices of bioinformaticians is a prerequisite for the library to meet the challenge of serving their needs. The purpose of this project is to review reports of gene function information in published microarray experiments, with regard to the authors' reporting of their information sources, retrieval strategies, and evidence for the effectiveness of any retrieval strategies used.

Methods: We searched Ovid MEDLINE on October 1, 2004, for the period 1966 to September, Week 4, 2004, with the query "Oligonucleotide Array Sequence Analysis/," producing 10,746 results. We then limited the results to English (10,374), excluded "review articles" (9,049), and limited to the years 2003–2004 (4,798). We next ranked journals in the results by number of articles, and selected a population of all of the articles from the 13 top journals (n = 1,373). We randomly sampled 150 articles from that population. First, we independently determined whether each article in the sample was relevant. Next, we independently classified the relevant articles with respect to the categories "Functional Attribution Reported," "Sources of Information Reported," "Retrieval Strategy Reported," "Grounds for Choice of Sources Reported," and "Grounds for Retrieval Strategy Reported." Finally, the independent classifications were compared and disagreements discussed until consensus was achieved.

Results: Our preliminary results suggest that the typical evidence for attribution of gene function consists of literature citations. However, details of the searches for the cited articles are rarely reported. Furthermore, when a literature search (e.g., PubMed search) or a search of other knowledge sources (e.g., NCBI databases) is cited as the source of evidence to support attribution of function, rarely are details of the search reported. Often the source is only partly identified. In addition, retrieval of gene function information is typically mentioned only in the "Results" or "Discussion" sections of the paper and not in the "Methods" section.

Conclusions: There may be multiple nonequivalent ways to use a given set of sources to access information about the function of a gene. Thus, evaluation of scientific results involving reports of gene function requires consideration of the sources and retrieval strategies used to obtain that function information.

69

A Passing Grade: Building toward Four Years of Curriculum-based Integrated Informatics

Enid Geyer, associate dean, Information Resources and Technology, and **Elizabeth Irish, AHIP**, head, Public Services, Schaffer Library of Health Sciences, Albany Medical College, Albany, NY

Objective: Establish a four-year medical school curriculum-based informatics program. Incrementally build on information retrieval and management skills through the basic science and clinical years. Expand the content over time to further integrate with curriculum. Receive official course status by reflection on the student transcripts.

Methods: Setting: Albany Medical College, one of the nation's oldest private medical schools, is part of the Albany Medical Center. Albany Medical Center is the only academic health sciences center in the 25 counties of eastern New York and western New England. The college has approximately 128 medical students in each class.

Brief Description: In 1993, a new theme-based curriculum was initiated, including pass/fail longitudinal courses. The library's goal has always been to establish, maintain, and continually strengthen an informatics course based on the longitudinal model. With the support of the college administration and faculty theme leaders, medical informatics is currently a recognized theme in years one through three with plans to create an elective in year four.

71

Looking Through a New Lens: Continuous Improvement in Action

Mary Beth Klofas, head, Information and Access Services; **Michele Shipley**, assistant director, Digital and Branch Libraries; and **Julia Sollenberger, AHIP**, director; Health Sciences Libraries and Technologies, University of Rochester Medical Center, Rochester, NY

Objective: Establish a culture of continuous improvement and a renewed emphasis on customer service at the library by reengineering our strategic planning and utilizing practical tools to evaluate and improve processes and services.

Methods: The authors of this project attended a series of eight workshops on continuous assessment and improvement for libraries and, with the input of the entire library staff, are implementing the philosophy and tools learned in the program. The setting is an academic health sciences library and two affiliated branch libraries with approximately thirty-five staff members

Results: The library has used the philosophy and tools gained in the workshops to make a difference—in our planning, in our customer service, and in launching teams to study specific initiatives and processes. We are using new lenses to look at our work, our staff, and our customers. The library's mission, vision, and values were crafted with the assistance of the entire staff. We developed high-level measures that will serve as the basis of our continuous improvement deployment. A pilot process was implemented to provide opportunities for staff training and for "convincing" the staff and our leaders that continuous improvement tools and strategies will make our work more efficient and effective. Five teams were chartered to tackle several of our key success factors (goals).

Conclusions: Continuous improvement and assessment has given us a new set of tools and a pathway to improving our services, so we may "surprise and delight" our customers.

73

Training a la Carte: Capacity Building with Lay Health Outreach Workers

Graciela G. Reyna, circuit librarian; **Debra G. Warner, AHIP**, RAHC Library director; and **Sylvia Muniz**, library assistant; Regional Academic Health Center Medical Library, University of Texas Health Science Center–San Antonio, Harlingen, TX; and **Mary Jo Dwyer**, retired, Briscoe Library, University of Texas Health Science Center–San Antonio

Objective: This poster reports on training for *promotores* (lay health outreach workers) on locating quality health information on the Inter-

net and in using computers to help convey the information to community residents.

Methods: Librarians design training to meet the specific needs of the *promotores* at the time that the needs occur. We have already designed training sessions in the following areas:

• Basic computer training (such as using a mouse)

• Internet: email, search engines and locating health information on the Internet, and evaluation of Websites,

• Basics of Word and PowerPoint

Training is conducted mostly in Spanish by bilingual library staff. Librarians also visit the promotoras in their community for coaching and follow-up.

75

Virtual Chat Reference Transcripts: Tapping into a Wealth of Data about User Population and Satisfaction, Online Reference Service Quality, and Resource Usage

Clista Clanton, Web development and education librarian; **Ellen Sayed, AHIP**, information services librarian and interlibrary loan coordinator; and **Geneva Bush Staggs, AHIP**, assistant director, Public Services and Education; Baugh Biomedical Library, University of South Alabama–Mobile

Objective: Virtual chat reference transcripts provide a complete written transaction of the interaction between the remote library user and the reference librarian. Analyzing chat reference transcripts can provide a wealth of information on the user population for this kind of service, user satisfaction, accuracy of the answers provided in response to requests, and resource usage by remote users. Additional data that can be gleaned from chat transcripts include peak usages times, types of questions asked, and repeat usage.

Methods: Virtual chat transcripts from July 2003 through February 2005 will be analyzed by two reference librarians to determine user population, the types of questions asked, accuracy of answers given, and the most requested resources used by remote users. Internet protocol (IP) address ranges will be analyzed to determine repeat users of the service. Peak usage times will be determined by entering chat initiation times into an Excel spreadsheet. A user survey will provide information on user satisfaction with the service.

Results: A total of 461 chats were initiated between July 2003 and February 2005. These chats generated 256 reference questions, 43 directional questions, 38 instructional questions, 37 training sessions, and 140 uncompleted sessions. Peak usage times were between 10:00 a.m.–11:00 a.m. and 2:00 p.m.–4:00 p.m. Usage was highest on Mondays (n = 95), with fewer chats initiated on Saturdays and Sundays (n = 40, n = 29). Approximately 20% of chat users completed the exit survey and indicated high satisfaction with the service. Service quality is high, with 88% of questions being answered correctly. The most frequently used resources were Ovid CINAHL, A–Z, the library's online catalog, the online interlibrary loan form, and electronic journals.

Conclusions: Reference chat transcripts can provide useful data on peak usage times, resource usage, user satisfaction, and multiple other indicators that can help determine both the development and success of the service.

77

Information Needs of the Millennials: Changing the Way We Educate Our Users

Patricia Greenberg, education librarian; **Elaine M. Attridge**, clinical and nursing librarian; and **Inhye Kim Son, AHIP**, electronic services and research librarian; Information Services, University of Virginia–Charlottesville

Objective: The millennial generation has unique characteristics and behavior patterns that affect their attitude toward library services. They have grown up with Internet connectivity, information overload, and the assumption of immediate gratification, which may account for their preference of Google over library databases. We will research their attributes and explore ways to better serve them including adapting current services.

Methods: Librarians at our institution noticed that current medical and nursing students are more computer literate than in the past and very confident searching for information. This prompted us to research the literature on information-related characteristics of this generation, which we will summarize for this poster. We have hypothesized ways to update our services and the way we teach to better meet their needs. Specifically, there is a need to improve the way we teach how to distinguish quality Internet information. For this poster, we will survey several academic professors and academic librarians, as well as a group of millenials from the Schools of Medicine and Nursing to discuss these hypotheses. Our findings will be reported, discussing what is desirable and why for current students and how libraries may need to change in the near future.

Results: Ten academic professors and librarians and ten millennials from the Schools of Medicine and Nursing were surveyed. The survey measured: (1) specific millennial characteristics such as goal directed, team oriented, and technologically savvy; (2) the effectiveness of teaching practices addressing these characteristics such as using relevant examples in instruction, working in groups, and keeping abreast of technology; and (3) teaching practices that are currently incorporated. The survey results supported our hypothesis that specific millennial characteristics addressed in the literature are recognized by both millennials and their instructors, and teaching practices should reflect new methods of addressing these specific characteristics.

Conclusions: Data suggest that instructors and students agree with the defining characteristics. They also agree that the teaching practices would be beneficial. However, not all of these practices are currently being utilized. Future endeavors would include educating instructors to incorporate these methods and changing library educational practices to address the millennial students' needs.

79

Diverse Methods for Obtaining User Feedback in a Web Redesign Project

Patricia G. Hinegardner, AHIP, Web manager, and **Alexa Mayo, AHIP**, assistant director, Information and Instructional Services, Health Sciences and Human Services Library, University of Maryland–Baltimore

Objective: Three different methods were used to obtain user feedback for a Web redesign project. This poster will highlight the methods and address the effectiveness of each for gathering information.

Methods: The importance of understanding how people use a Website has been well documented in the literature. Three methods were used to obtain initial user input from the campus community for a Web redesign project: focus groups, a Web-based survey and a Rate-this-Page feature that appeared on individual Web pages. The focus groups provided in-depth qualitative data. It was a way to learn the opinions and attitudes of users. It provided the opportunity to listen to people share and compare various points of view. The Web-based survey provided quantitative data and reached a broader audience. Rate-This-Page, also a quantitative approach, gave people the opportunity to give feedback at the point-of-use.

Results: The information gathered from these tools was analyzed and will be highlighted on the poster.

Health Information Outreach to Rural Care Providers and Consumers: Challenges and Pitfalls in the Implementation Stage

Teresa Houk, outreach coordinator, and **Mary Grace Flaherty**, director, Sidney Memorial Public Library, Sidney, NY

Purpose: To present challenges and pitfalls encountered in the implementation stage of a health information outreach project in the hopes that our experience will benefit others who are considering, planning, or evaluating a similar outreach project.

Setting/Participants/Resources: Delaware County is a large, rural county located on the eastern border of New York's Southern Tier Region. The organizations involved in coordinating and supporting the project are the Sidney Memorial Public Library, the Rural Health Education Network, the Rural Health Network of South Central New York, and the George Miner Mackenzie Medical Library of Bassett Healthcare. The performance sites for the project include the four hospitals serving Delaware County and four clinics. Funding for the project comes from an information system grant from the National Library of Medicine.

Description: The objective of this project is to provide increased access to quality health information to rural care providers and consumers. The first goal of the implementation stage is to increase access to the Internet at the participating sites. This involves the installation of computer workstations in patient waiting areas and staff areas at the eight health care facilities. The second goal is to provide training to the staff, providers, and consumers in effective use of the online resources from the National Library of Medicine.

Results: The challenges and pitfalls encountered early in this ongoing project include a significant turnover of providers and hospital administrators. In two major sites, the staff who served as key contacts and supporters of the grant during the application process were no longer with the organization when work on the project began. Another critical challenge has been the reluctance of the hospital information technology (IT) staff to communicate and collaborate with the investigators. Finally, a pitfall that was not fully anticipated has been the lack of basic computer skills presented by hospital staff, health care providers, and consumers.

Conclusions: As our project evolves, we intend to continue to forge partnerships with providers and administrators, to seek ways of resolving conflict and encouraging collaboration with IT staff, and to provide training opportunities appropriate to all levels of ability, knowledge, and interest.

Examining Two Instructional Methods: Is One More Magnificent than the Other?

Kathleen A. McGraw, assistant department head, User Services, and **Anna Krampl**, graduate assistant, Health Sciences Library, University of North Carolina–Chapel Hill

Objective: To evaluate the effectiveness of teaching basic PubMed skills to dental students using a lecture versus a Web-based format by comparing their ability to apply demonstrated skills on a posttest.

Methods: In spring semester 2005, first- and second-year dental students, approximately eighty students per class, were required to take a one-credit information management course. Neither group had previously received formal PubMed instruction. Given the structure of the curriculum, first- and second-year students met in different sections. First-year students had up to fifty minutes of class time to study a Web tutorial introducing PubMed basics. Second-year students received a fifty-minute lecture demonstration of the same tutorial. A lab session immediately followed the instruction session during which each group worked on a Blackboard assignment designed to assess their ability to apply what they learned. Students had up to fifty minutes to complete the assignment. A comparison of answers submitted by each group was made to determine if either type of instruction significantly increased learning.

Results: The 2 groups started from different baselines: 50.6% of 1st-year students had no prior PubMed experience, compared 33.3% of 2nd-year students. Despite this difference and the difference in class formats, the average number of correct answers on the assignment for each group was equal. First-year students averaged 11 correct out 14, and second year students averaged 11.3. Instructors observed that more instructors were needed to support the tutorial group. They recommended having at least 1 instructor per 20 students in a tutorial group, while 1 per 40 was sufficient for the lecture group. Seventy-five percent of the lecture group and 82% of the tutorial group indicated a preference for learning the material from a tutorial.

Conclusions: Results of this study indicate that how material is presented does not impact learning outcomes when teaching basic PubMed searching. Decisions about how to teach this content can be based on other criteria. Tutorial development and classroom support for students learning from a tutorial is more labor intensive. However, students indicate a strong preference for learning this way.

Reaching Out to Local Communities through COIN: Virginia Commonwealth University's Community Outreach Information Network

Jean P. Shipman, AHIP, director, and **Susan J. Phipps**, COIN coordinator, Tompkins-McCaw Library for the Health Sciences; **Cynthia J. Simonson**, senior advisor to the director, Clinical and External Affairs, Massey Cancer Center; and **Deborah Frett**, COIN assistant, Tompkins-McCaw Library for the Health Sciences; Virginia Commonwealth University–Richmond

Objective: To improve health literacy by formalizing a network, Community Outreach Information Network (COIN) of Virginia Commonwealth University (VCU) consumer health information centers with affiliate university programs and community agencies to provide local citizens with one-stop-access to health information resources.

Setting/Participants: Intermediaries who are approached by underserved and minority populations in the greater metro Richmond area are the prime audience for the COIN network. However, any citizen can obtain health information through the COIN network it is accessible via the Internet and telephone.

Methods: COIN staff train intermediary users, those informally consulted by consumers for health information, about COIN's four consumer health information centers as well as MedlinePlus. A customized version of the National Library of Medicine/American College of Physicians Foundation Information Rx is distributed to intermediary users to refer consumers to COIN as well as to reliable Internet resources. Public librarians, pharmacists, and senior center volunteers have been the first populations to receive training and COIN promotional materials. One COIN telephone number (804.827.COIN) and Website <www.library.vcu.edu/coin/> facilitate referrals to COIN centers and individual assistance.

Results: Training sessions have been conducted with the greater metro Richmond public librarians, SeniorNavigator Centers volunteers, and selected local pharmacists. A COIN Website and one central telephone number have been established. Staff at the Tompkins-McCaw Library for the Health Sciences (TML) have been trained how to triage incoming COIN calls. Promotional materials have been created and distributed including COIN pens, tipsheets, press releases, and newspaper articles. Each COIN center also promotes COIN through their Websites, public relations materials, and other more information communications.

Conclusions: Through COIN, efforts of VCU's four consumer health information libraries are being formalized and jointly promoted to the local Richmond, VA, community. Citizens are accessing quality health information as a result.

95

Collection Development Practice: Supplementing Electronic Subscriptions with Unmediated Pay-per-view Access to Health Sciences Journals

Beth Bernhardt, electronic serials librarian, and **Lea Leininger**, life sciences librarian, Jackson Library/Reference Department, University of North Carolina–Greensboro

Objective: Unmediated pay-per-view access to journal literature allows expanded access for users and flexible collection development.
Methods: At Jackson Library, subscriptions to aggregator databases and online journals are supplemented by unmediated pay per view. The library deposits money into a pay-per-view account. Patrons may then access non-subscribed articles, including current issues of embargoed titles and articles from journals whose limited demand does not justify a subscription. Usage statistics indicate the titles that are good candidates for subscription.

97

Diverse Partners—a Hospital Library, a Middle School, and a Lung Association—Connect on the Lung Express

Craig Haynes, head, Medical Center Library, University of California–San Diego

Objective: The University of California-San Diego (UCSD) Medical Center Library, the Preuss School UCSD, and the American Lung Association (ALA), three diverse groups, collaborated in order to create a lung and respiratory health curriculum appropriate for middle school students.
Methods: The ALA of San Diego and Imperial Counties has a unique ambassador: *The Lung Express*. This forty-foot, gas-powered bus, converted into an exhibit space and equipped with interactive lung and respiratory health exhibits, is but one part of an outreach program created by ALA for elementary students. The Preuss School UCSD is a charter middle and high school (grades 6-12) in La Jolla, CA, with approximately 750 students (57% are Hispanic, 15% African American, 22% Asian American, and 6% are European American). Having seen *The Lung Express* in action with elementary students, the UCSD Medical Center librarian was interested in developing a more challenging curriculum and test the effectiveness of that curriculum on a group of middle school students. Through an award from the Pacific Southwest Regional Medical Library (PSRML), the ALA, the library, and Preuss created a demonstration project and curriculum for sixth grade students.
Results: One hundred and thirty-five sixth grade students participated in this project and received two hours of classroom instruction: forty-five minutes consisted of instruction regarding the respiratory system and air quality and an additional forty-five minutes of hands-on training focused on information resources, MedlinePlus Child and Teen Health Topics and the National Library of Medicine's (NLM's) ToxTown. The final segment of the students' training was a visit to *The Lung Express.* Later, students completed a variety of "science fair" type projects, including anti-tobacco campaigns and reports on asthma and other lung health and disease topics. As a token of their participation, each student received a Lung Express t-shirt.
Conclusions: Adding an information resources component to the ALA's already strong curriculum and requiring students to complete a project using those information resources from the training proved to be an effective way to add more substance and challenge this group

of highly motivated sixth grade students. Project coordinators recently received an additional award to develop a peer-training program for a select group of twelfth grade students.

99

Information Needs and Behaviors of Directors of University Hospitals in Japan

Shinichi Abe, librarian, Medical Information Center, Jikei University School of Medicine, Tokyo, Japan; **Yumi Yamashita**, librarian, Medical Library, Kyoto Prefectural University of Medicine, Kyoto, Japan; and **Miyuki Komiya**, librarian, School of Medicine Library, Fukuoka University, Fukuoka, Japan

Objective: There have been few studies of physicians' information needs in Japan. In 2000, Yamaguchi and his colleagues investigated information needs for about 1,000 general practitioners and directors of general hospitals, other than university hospitals, throughout Japan. In the present study, we investigated the information needs of directors of university hospitals to supplement the previous study.
Methods: We studied the information needs of all directors of university hospitals in Japan. A questionnaire was sent to all seventy-eight university hospitals in Japan with a self-addressed envelope. Most questions were identical to those used in the previous investigation.
Results: The response rate was 44%. The questionnaire showed that 50% of the respondents spent 1 to 2 hours per day searching for medical information and that 100% obtained the information from academic journals. About 80% of respondents had used the library of their own university, and 80% used the information resources on their university's computer network. More than 90% of respondents were satisfied with the present situation.
Conclusions: In this survey, different information needs and behaviors were identified than in the study of 2000. Continued research will aid information professionals in characterizing and determining the information needs and behaviors of clinicians in Japan.

101

Beyond Google: Teaching Users to Search the Web More Effectively

Janet G. Schnall, AHIP, information management librarian, and **Edward Roberts**, head, Information Systems, Health Sciences Libraries, University of Washington–Seattle, and **Andrew Hamilton**, reference and instruction librarian, Library, Oregon Health & Science University–Portland

Objective: Describe alternative ways for searching the Web more effectively to locate information beyond the popular Google search engine and the methods used to teach and advertise "Beyond Google" to a variety of library users.
Methods: A class developed at another health sciences university library on how to effectively use Internet search engines other than Google to locate information was expanded for use at the University of Washington Health Sciences Libraries, an urban academic health sciences center serving six health sciences schools. Google is often the only Web resource consulted by users. However, there are many other useful search engines that possess features, such as result clustering and visualization, not offered by Google. The class describes Advanced Google techniques, compares several Internet search sites (e.g., Vivisimo, KartOO, SurfWax, ZapMeta, etc.), and discusses the Invisible Web. Several methods are used to teach and advertise "Beyond Google" to a variety of users: hands-on class as part of the regular library education program, curriculum-integrated presentations to health sciences students, featured on library Website home page, Website <healthlinks.washington.edu/howto/beyondgoogle.html>, special workshops for

librarians, and class offered as part of library liaison marketing campaign targeting researchers.

Results: Online class evaluations were excellent ,and students/attendees showed little previous knowledge of Web search engines beyond basic Google.

Conclusion: The "Beyond Google" class will be integrated into additional curriculum classes in the next academic year as well as offered by library liaisons to their department's faculty and staff.

103

Come Together Right Now, Over Me! Celebrating How the Library Can Bring Together Diverse Programs

David A. Nolfi, AHIP, health sciences librarian, Gumberg Library; **Hildegarde J. Berdine**, assistant professor, Pharmacy Practice, School of Pharmacy; **Bridget C. Calhoun**, department chairperson and assistant professor, Rangos School of Health Sciences, Department of Physician Assistant; and **Lenore Resick**, acting director, Nurse Practitioner Department, and associate professor, School of Nursing; Duquesne University, Pittsburgh, PA

Objective: This poster illustrates librarian and faculty collaboration through the process of writing and implementing a Library Services and Technology Act grant to purchase personal digital assistants (PDAs) and software for students on clinical rotations, bringing together faculty and students from three different health sciences schools.

Methods: Duquesne University is a medium-sized, research-intensive university in an urban setting. Pharmacy, nursing, and health sciences comprise three of its ten schools, all served by Gumberg Library. The library approached deans and faculty from the three health schools to discuss the grant and learned that the schools were eager to partner with the library as well as each other. A repeated comment was that faculty in one school rarely work with colleagues in the other health schools.

Results: After receiving funding, the authors formed a successful partnership to implement the grant. They have also begun to collaborate on additional projects involving both students and faculty:

• Library, nursing, and health sciences faculty partnered to obtain a National Network of Libraries of Medicine (NN/LM) funding contract providing community service and new student service learning opportunities.

• Pharmacy and health sciences faculty collaborated in the Chronic Pain Initiative to improve communication about pain between patients and health care providers.

• Pharmacy students participate in health screenings at School of Nursing community wellness centers. Faculty and students from both schools jointly present health fairs at community sites.

PDA student group sessions provide first-time opportunities for faculty and students from the three schools to interact professionally. Pharmacy students explain drug information sources to physician assistant (PA) and nurse practitioner (NP) students, while PA and NP students discuss their roles in diagnosis, treatment, and research. The team is seeking new ways to form partnerships and build relationships across school lines.

Conclusions: The Gumberg Library served as a unique and dynamic catalyst for increased cooperation among students and faculty in three health schools. Libraries need to explore moving beyond their traditional domain of providing collections and services, seeking opportunities to participate in active learning while more closely aligning with institutional goals and initiatives.

105

Evaluating Our Web Presence: A Practical Approach for Health Information Website Evaluation

Frederick B. Wood, computer scientist, and **Elliot R. Siegel**, NLM associate director, Health Information Programs Development; **Eve-Marie Lacroix**, chief, Public Services Division; **Becky J. Lyon**, deputy associate director, Library Operations Division; **Dennis A. Benson**, chief, Information Resources Branch, National Center for Biotechnology Information; and **Victor Cid**, computer scientist, Office of Computer and Communications Systems; National Library of Medicine, Bethesda, MD; **Susan Fariss**, search analyst, FirstGov, General Services Administration, Washington, DC; and **Cynthia Love**, technical information specialist, Specialized Information Services, National Library of Medicine, Bethesda, MD

Objective: Develop, test, and implement a multidimensional approach to evaluation of health information Websites. Determine which mix of methods are being used by the National Library of Medicine (NLM) Websites and for what purposes. Test the hypothesis that this multidimensional approach provides more robust results than relying on a single or limited evaluation technique. Discern lessons learned from NLM's Web evaluation experience to date that can be generalized to other health information Websites.

Methods: NLM's multidimensional approach includes the following: usability testing (e.g., heuristic review, usability lab testing, informal usability feedback); user feedback (e.g., online external user survey, focus group in person and online, nationwide syndicated survey, unsolicited user feedback); usage data (e.g., Web log data analysis, Internet audience measurement); and Web and Internet Performance (e.g., page download time, available bandwidth).

Results: The following NLM Websites were selected for review: MedlinePlus, PubMed, NLM home page, TOXNET, and AIDSinfo. For each selected Website, all known evaluation techniques used in the last several years to the present were identified, and the evaluative results and implications highlighted. The relative utility of the varied evaluation methods was assessed by comparison of results/implications across methods and Websites.

Conclusions: The strongest composite evaluative insights emerged from the use of various combinations of Web evaluation methods. Individual methods have differing relative strengths and limitations. The results confirmed the validity of the multidimensional approach to Web evaluation and suggest that this approach would be applicable to other organizations with significant Web-based health information activities.

107

To Dream the Impossible Dream: Benjamin S. Carson, Pediatric Neurosurgeon

Michelle L. Burda, consumer health librarian, Health Sciences Library, University of Pittsburgh, Pittsburgh, PA

Objective: To portray triumph over adversity, the life and work of Benjamin S. Carson. This poster will depict Carson's rise from poverty, violence, and being labeled stupid, to his prestigious appointment as the youngest director of pediatric neurosurgery at the Johns Hopkins Children's Center in Baltimore, his humanitarian efforts, and his life threatening battle with cancer.

Methods: Through the use of graphics and text this poster will focus on the obstacles Carson overcame to become a world-renowned pediatric neurosurgeon and humanitarian. Highlighted will be his medical accomplishments in the field of pediatric neurosurgery and craniofacial surgery, his work with inner city youth, his election to the White House's Bioethics Panel, and his philosophy for success in life.

Results: A poor child, raised in urban Detroit, by a single mother who had a third-grade education, Carson's future was bleak. Sonya Carson, his mother had other plans for her children. She taught them to believe in themselves and to understand that reading was important to learning and that education was the key to overcoming poverty and low self-worth. With his mother's guidance and inspiration, Carson defied the

odds. He was awarded a scholarship to Yale, went on to medical school, and, in 1984, became the youngest director of pediatric neurosurgery at Johns Hopkins.

Conclusion: Benjamin S. Carson, a child who dreamed the impossible dream. Now a doctor who is respected for his work in medicine, who inspires hope in our youth, who teaches them to believe in themselves, and who motivates us all to become the best we can be.

109

Reaching Out to Underserved Seniors: Access to Electronic Health Information for the Public

Kelly K. Near, outreach librarian, Information Services, Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Objective: This poster reports on a collaborative outreach project designed to improve access to electronic health information for seniors in central Virginia.

Methods: The project, undertaken by an academic health sciences library, with funding from the National Network of Libraries of Medicine (NN/LM), was intended to improve the ability of seniors to answer their health questions by accessing Internet sources such as MedlinePlus and NIHSeniorHealth. The project includes a partnership with SeniorNavigator.com, an initiative whose mission includes using technology and volunteers to link seniors to comprehensive local health information in Virginia. Project activities include educating staff and seniors at four rural and underserved senior centers about accessing reliable health information online, with direct training of senior clients, who learn to access health information resources independently or are assisted in that endeavor by a training coordinator. During the project, the training coordinator is available to give onsite assistance to seniors in using grant-supported computers with Internet connectivity at the senior centers. In addition, library staff use the library's seven wireless laptops as a mobile computer classroom for small-group training sessions at the centers. Each quarter a number of seniors are interviewed about their capacity to find health information online.

Results: During 2004, library staff held 33 group classes with a total attendance of 327 seniors. Classes consisted of training in basic computer skills, email, word processing, and introduction to the Internet and online heath resources. During the first 4 quarters of the project, seniors individually, or with help from the training coordinators, documented using the center computers to access the Internet 163 times. Ten seniors were observed and interviewed about their ability to answer a health-related question by accessing an online resource.

Conclusions: This project has been successful in introducing computers and the Internet to senior center staff and previously underserved seniors in Central Virginia. Using selected online resources to answer a specific health-related question, although proving to be quite difficult for most seniors, was viewed positively by most seniors interviewed. Total numbers of classes given and numbers of seniors interviewed will be available at the conclusion of the project in June 2005.

111

Changing Times, Changing Needs? Planning for Library Program Assessment

Carol L. Perryman, TRLN fellow and PhD student, School of Information and Library Science, University of North Carolina–Chapel Hill

Objective: In view of the changes in the Joint Commission on Accreditation of Healthcare Organizations' Patient and Family Education standards, to design a plan for the assessment of consumer health and patient education related services at two academic health science libraries; to ensure that the data is pertinent, complete, and timely as possible; to build a model for assessment of other library programs and services.

Methods: Using a logic model to ensure that efforts will achieve their intended purpose, an initial categorization of factors contributing to the libraries' various consumer health and patient education related services is carefully examined for logical structure. This listing of categories then becomes a pathfinder to the libraries' internal documentation and beyond their walls to related resources within the hospital and community. The resulting data are evaluated, then information gaps identified by the process are filled by drawing on staff knowledge. Interviews, focus groups, or surveys are then employed to gather qualitative information for a comprehensive and detailed snapshot of the libraries' current investment in these services.

Results: The program assessment project continues to evolve, and thus this paper is more a report about the process of planning and evolution than it is about findings or final recommendations. There is considerable value, however, in working toward such a snapshot, in that it offers opportunities to scrutinize individual components and to examine overall resource allocation as it exists to meet library goals.

Conclusions: Though the project was not conceived as an attempt to evaluate or compare the components contributing to services to the general public in two academic health sciences libraries, performing the two case studies inevitably highlights differences between the two, as well as helps to identify questions for further study.

113

"Blending In": Functioning as a Blended Librarian in an Evidence-based Nursing Course

Deborah G. Lovett, librarian, Educational Services, George T. Harrell Library, Penn State College of Medicine, Hershey, PA, and **Nancy I. Henry, AHIP**, health sciences librarian, University Libraries, Penn State University, University Park, PA

Objective: To determine the effectiveness of the blended librarian in developing and teaching evidence-based nursing practice by integrating information literacy and handheld technology in a team-taught course.

Methods: The librarians developed a theoretical framework to design and teach an undergraduate evidence-based nursing (EBN) course that tightly integrates information literacy and handheld technology into the course design in an effort to enhance student learning. Steps in this process include: (1) collaborating with nursing faculty to design the course; (2) obtaining funding to purchase personal digital assistants (PDAs) and software for student use during the course; (3) developing two online tutorials to supplement the classroom experience (one on EBN practice concepts and resources and one on using a PDA); (4) utilizing small group sessions in which the nursing faculty member and the librarian will work together with the students to find the EBN resources necessary to compete an assignment; and (5) assessing the effectiveness of bringing the librarian's expertise into the classroom through student and faculty opinion surveys.

Results: This model was successfully tested in an undergraduate research course. There was great collaboration between librarians and faculty with small group teaching sessions designed around specific clinical issues. Funding of the PDAs proved problematic but is still under investigation for future purchase. The tutorials will be available for student use in subsequent semesters. Survey results showed high satisfaction on the part of both students and faculty.

Conclusions: It was determined that using the blended librarian approach with adequate faculty collaboration is an effective way to teach searching skills, because the students are able to apply their learning in concrete ways in the clinical setting, thus reinforcing the concepts presented.

115

Weblogs as a Library Outreach Tool

Kevin R. Messner, assistant science librarian, Bio-Medical Library, University of Minnesota–Minneapolis

Objective: This poster will describe and demonstrate several applications of Weblogs ("blogs") developed as communications, outreach, and instructional tools in a large academic health sciences library setting.
Methods: Library staff have taken advantage of a local library Web server running the Movable Type publishing platform to create a variety of Weblogs, both for communications with user and outreach groups and for library staff communications. The software implementation allows library staff to customize (e.g., the appearance, accessibility, and interactivity of the blogs), depending on the purpose of the particular blog. Web counter statistics are being used to monitor the blogs' usage.

117

Lessons Learned: Outreach to Senior Citizens

Cheryl Rae Dee, AHIP, assistant professor, School of Library and Information Science, University of South Florida–Tampa, and **Priscilla L. Stephenson, AHIP**, coordinator, Reference Services, and **Lin Wu**, reference services librarian, Health Sciences Library, University of Tennessee Health Science Center–Memphis

Objective: This report describes two projects involving outreach to senior citizens. In one, public librarians were trained to use National Library of Medicine (NLM) databases to meet senior citizens' needs; in another, seniors learned to use NLM databases. Both projects studied the information-seeking behavior of seniors and provided practical information for librarians training seniors by adapting traditional database training techniques to accommodate the seniors' special needs.
Methods: In 2 NN/LM-funded database training projects in Tennessee and Florida, more than 200 seniors and public librarians from a variety of social, economic, and educational backgrounds were trained to use MedlinePlus and other NLM databases at community senior citizen centers, senior residential communities, and public libraries. Seniors at both sites were trained to use MedlinePlus in large auditorium settings and in small groups of 10 or fewer. MedlinePlus tutorial handouts supplemented the instruction. Information about seniors' medical information needs and medical information-seeking behavior was gathered from surveys and observations during training sessions.
Results: Seniors in these programs learned best with hands-on instruction in small group settings. Seniors were interested in searching for health topics of personal interest. Workshop instructors were more successful with sequential, chronological instruction that avoided tangential topics. Instructors learned to speak slowly, clearly, and loudly enough—without condescension—when working with the seniors. Instructors found it was important to share small keepsakes such as pens or notepads and that cookies and snacks were great for breaking the ice.
Conclusions: Both programs were successful in explaining the benefits of using quality health care information resources on the Internet. Seniors learned to use MedlinePlus and other NLM databases to explore health topics of personal interest.

119

WebHealth for Seniors: A Website for Senior Citizen Centers

Priscilla L. Stephenson, AHIP, coordinator, and **Laura A. Blalock**, assistant, Reference Services, Health Sciences Library, University of Tennessee Health Science Center–Memphis; **Mary Virginia Taylor**, director, Medical Library, VA Medical Center, Memphis, TN; **Kay Cunningham**, electronic resources librarian, Ned R. McWherter Library, University of Memphis, Memphis, TN; **Lin Wu**, reference services librarian, Health Sciences Library, University of Tennessee Health Science Center–Memphis; and **Jan T. Orick, AHIP**, director, Biomedical Library, St. Jude Children's Research Hospital, Memphis, TN

Objective: Development of a MedlinePlus training program for senior citizens required creation of a Website. The site provided a review of MedlinePlus basics for the seniors and allowed us to develop additional health information resources for them.
Methods: Easily available and accessible open source software was used to create a site that was easy for seniors to read and use. The site was developed with large fonts and clear color contrasts for low-vision readers and with minimal graphic files to allow easy access from older, slower computers. The site was developed to meet Bobby and other disability compliant standards. The Website includes a MedlinePlus tutorial to support the workshops and a directory of area health resources including clinics, the county health department, and various state health care agencies. A small database of elder health care information provides a first-step in answering consumer health questions about senior health issues.
Results: Seniors in our workshops report that this Website is helpful as a quick link to Memphis-area health information and other useful health databases for seniors. They feel more confident in their ability to search for quality health information on the Web. Workshop instructors appreciated having the MedlinePlus tutorial accessible during classes and for seniors' use afterwards.
Conclusions: Using the accessibility standards helped make this site easy to read and use for seniors with vision and other access issues.

123

Capturing Knowledge Management Practices of Local Expert Librarians to Inform the Development of a Virtual Case Training Tool

Molly Cahall, librarian; **Nila Sathe**, assistant director, Research; **Pauline M. Todd**, librarian; **Rebecca Jerome**, assistant director, Filtering and Evidence-Based Services; and **Nunzia B. Giuse, AHIP**, director; Eskind Biomedical Library, Vanderbilt University, Nashville, TN

Objective: To elucidate processes in conceptualizing clinical information needs, locating and selecting optimal evidence, and synthesizing results and knowledge gained in the course of the search into a summary of the state of the medical literature on a question. To embed these process analyses in a training tool that can foster the spread of such evidence-based practice.
Settings/Subjects: Six intermediate and experienced librarians of differing skill levels at a large academic medical center.
Methods: Employing ethnographic and human factors research methods, investigators observed Clinical Informatics Consult Services (CICS) librarians answer complex questions, from initiation of the search process through evidence selection and appraisal and development of a literature summary. Librarians were instructed to "think aloud" to detail their manual and intellectual processes, background and tacit knowledge, and reasoning. Using notes and audio recordings of observation sessions, investigators transcribed and coded sessions to denote tasks or steps, supporting knowledge, sources of such knowledge, and its importance or relevance.
Results: Analysis of observations revealed that librarians typically followed a core set of steps with variations in methods for conceptualizing questions, fine-tuning search strategies, and selecting articles. Supporting knowledge sources, methods of critical and clinical reasoning, speed of process execution, and workflow patterns varied by question complexity and level of librarian experience. Primary steps in the observation-based process analysis include: developing background

knowledge, identifying search topics and concepts, identifying relevant resources, executing searches and refining search strategy, broadening search to other resources, reviewing citations and developing initial article list, final selection of articles, and developing article syntheses and state of literature.

Conclusions: Investigators have integrated analysis results in a training tool delineating processes, implicit knowledge, and reasoning in critical appraisal and synthesis. The tool contains an assessment of readiness to practice advanced critical appraisal, interactive tutorials covering search and appraisal techniques, problem-based virtual practice cases, and templates to assist in generating initial summaries of relevant articles.

125

Preserving the Past for the Future: Creating a Digital Physician Assistant History

Charlie S. Lackey, associate director, Cataloging/Collection Development Services, Medical Center Library; **Russell S. Koonts**, DUMC archivist, Medical Center Archives; **Sarah I. Wardell**, associate director, Information Technology Services, Medical Center Library; **Mira P. Waller**, archivist, Society for the Preservation of Physician Assistant History; and **Patricia L. Thibodeau, AHIP**, associate dean, Medical Center Library; Duke University, Durham, NC

Objective: Archival services preserve many historical documents not only about institutions but also about trends in health care. Gaining access to archival print materials can be difficult, especially for remote users. The challenge is to use new Web-based and scanning technologies, and encoded archival description (EAD) standards to provide access to unique historical materials to support scholars, students, and health professionals.

Methods: The institution had a unique role in the development of the physician assistant (PA) profession and its archives holds a number of important records that would be of interest to PAs, students, and scholars. The library in partnership with the PA History Office and Society for the Preservation of PA History developed a digital resource of key historical materials. The library investigated standards for creating metadata, such as Dublin core and EAD, to make the images accessible through search engines. In addition, standards for scanning and storing the digital images were implemented. The archival finding aid was tagged using metadata and links were built to images on the Website. To implement the project, a diverse team of "experts" was assembled to organize, monitor, and implement the digital resource.

Results: The Physician Assistant History (PA Hx) Website has received numerous accolades from faculty, students, and practitioners. Over 3,300 pages of scanned documents and 743 other items—including photographs, images of memorabilia, audio recordings, and video files—were organized into a searchable database. The director of the Society for the Preservation of PA History has built online exhibits around key themes. In addition, the society has obtained additional collections and has hired an archivist to work with the collection and conduct educational programs. Duke University Medical Center Archives has entered into an agreement to store and preserve the society's archives and growing collection.

Conclusions: The PA Hx Website was developed by pulling together a team of experts who tapped into a growing body of standards for digital projects. The project serves as a model for how libraries can preserve local and historical documents while providing access for future scholars, students and practitioners.

127

CORE: MLA's Center of Research and Education and Gateway to Lifelong Teaching and Learning

Connie Schardt, AHIP, education coordinator, Medical Center Library, Duke University, Durham, NC

Objective: To develop a repository of educational modules and objects that can be shared and used by the MLA membership to foster collaboration and to expand educational opportunities

Methods: MLA's Center for Research and Education (CORE) will provide a virtual community for sharing people's health information education expertise and talent, while preserving their unique perspectives; expanding educational access to those who need it; and helping attract the best new recruits to our workplaces, enabling them to be successful health information professionals. The poster will outline the work of the MLA task force including the charge, mission, and vision of the CORE. The poster will highlight the MLA Member Professional Toolbox, which is being used to collect, organize, and disseminate CORE resources. The toolbox serves as the digital collection of member-generated educational materials and information. Records can be searched by keyword and by general subject area. MLA members will be encouraged to share their materials through the CORE database, as well as use CORE materials submitted by other members.

129

Dealing with Journal Cuts: Magnificent Future?!

Judy Woodburn, AHIP, head, Journals Deparment; **Beverly Murphy, AHIP**, assistant director, Marketing and Publications; and **Richard A. Peterson, AHIP**, deputy director; Medical Center Library, Duke University, Durham, NC

Objective: This poster will show how the Duke Medical Center Library dealt with a 1-year journal budget cut of 32%, when its funding was sharply reduced. While much smaller budget cuts and escalating costs prompted journal reviews in 1980 and 1993, the $800,000 reduction in the library's total budget for 2002/03–2003/04 necessitated a much more extensive review.

Methods: A comprehensive journal database was built with criteria such as ISI impact factor, number of interlibrary loan requests, and cost for each of the 1,757 subscriptions. Sixty-five subject groups geared to Duke interests were devised; titles were assigned to appropriate groups and added to the database. The library actively solicited involvement from medical center departments to serve as external reviewers. The response was quite good with contacts established for 58 of 62. Lists of journals were prepared by discipline for ranking of titles by the appropriate departmental contacts. A 6-member library committee reviewed the departmental rankings and selected titles for cancellation, with additional input from neighboring libraries. The list of potential cancellations was widely publicized in various formats for feedback from faculty and other users.

Results: Some 532 journals were canceled, representing 30% of the library's current subscriptions and 32% of the journal budget. As a result of the publicity campaign, users became much more aware of scholarly publishing costs and issues. Ongoing relationships were established with many of the departmental reviewers. The library used the cuts as an opportunity to leverage the influence of its consortium for development of new models for licensing of electronic journals.

Conclusion: Though the review took a great deal of time and involved a number of participants for more than a year, the hard work, attention to detail, and strong publicity effort paid off in a generally smooth transition to a greatly scaled back journal collection. User complaints were limited to a few faculty members, with most users quite sympathetic to the library's reduction in funding.

131

ALERT: Helping Patrons Keep Current

Dorothy Barr, information literacy librarian, and **James Comes**, associate director, Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: Describe an instructional/marketing program to promote alerting services to medical school faculty, students, staff, and researchers.

Methods: Biomedical professionals find it increasingly challenging to keep up with the enormous amount of research information available. Alerting tools are evolving rapidly to assist them in retrieving and organizing the most current information. Services currently available include table of contents notifications from individual journals, publishers' alerts, and Web-based applications such as Biomail. Some are fee-based and others are free. The options vary widely in their scope, and most researchers and clinicians find that no one service is completely adequate. The poster will describe the classes and handouts the Lamar Soutter Library at the University of Massachusetts Medical School has designed to assist patrons in choosing appropriate services, and will describe how the program has been marketed.

133

The Future of the Teaching Hospital Library and Residency Core Competencies

Beth G. Carlin, AHIP, manager, Library Services, Ramon E. Casas Medical Library, St. Francis Hospital, Evanston, IL

Objective: This poster reviews a measured plan for a teaching hospital library to support its residency program core competency requirements.
Methods: The Medical Library at St. Francis Hospital supports the core competencies for graduate medical education through evaluating the selection and effectiveness of knowledge-based medical information resources. The residency program requires its residents to obtain competencies in six areas. Two areas are linked to information resources provided through the hospital library including medical knowledge and practice-based learning and improvement. Assessment and evaluation tools of the knowledge-based resources are described. Core competency data is reviewed before and after resources are introduced. The teaching hospital library can effect positive outcomes in core competencies.

135

Linux Can Change the Face of Automated Library Information Systems

Janis Teal, AHIP, deputy director, Library and **Greg Gaillard**, deputy director, Technology Support, Health Sciences Library and Informatics Center, The University of New Mexico–Albuquerque

Objective: This poster will report on how the library faced the dilemma of replacing an antiquated library information systems (LIS) server in a cost-effective manner that would make use of $10,000 available funding, improve system functionality and performance, and decrease overall system costs.
Methods: Case Study: Recognizing the need to upgrade the system, the deputy directors analyzed several options: (1) combining systems with the main campus libraries, (2) purchasing a new Compaq Alpha server at $20,000, or (3) implementing a Linux-based LIS running on Intel "commodity" hardware. We selected option 3 and, at the conclusion of the project, became the first library in the United States to implement Innovative Interfaces, Inc. (III) LIS software on a Linux server. Employees in both library services and technology support consulted with III staff throughout the process of configuring the server, updating the III software, and migrating records.
Results: (1) The project successfully upgraded the hardware, the operating system, and the application software to current III standards. (2) There was a significant increase in performance and functionality. (3) This implementation was accomplished at one-third the cost of using a non-Intel server platform. (4) The Linux-based Intel system represents significantly decreased hardware capital and maintenance costs. (5)

There is no longer a need for the library to have in-house DEC Unix expertise, an intangible but significant cost savings. (6) Additional intangible cost savings are expected in the future, when, in contrast to standard server hardware, the new hardware running Linux can be repurposed after the current system is upgraded.
Conclusions: A small to mid-sized library can effectively run a Linux/Intel LIS system at demonstrably lower cost than doing so on proprietary reduced instruction set computing (RISC)-based software or hardware.

137

How Diverse Types of Librarians Increased Access to Electronic Journals, Developed a Print/Electronic Collection Development Policy, and Preserved the Collection

Patricia Wilson, associate director, Public Services; **Kathie Obrig**, associate director, Collection and Access Services; **Cynthia Swope**, serials librarian; **Laura Abate**, electronic resources and instructional librarian; and **Anne Linton, AHIP**, director, Library Services; Himmelfarb Health Sciences Library, The George Washington University, Washington, DC

Objective: This poster will report on a project initiated to establish a framework for evaluating our serials collection in order to preserve the collection from a flat budget and ever-increasing serial costs and to meet patron demand for expanded access to electronic resources. An additional outcome was the development of a combined print and electronic serials collection development policy.
Methods: The health sciences library serves a large, urban academic medical center. As programs expanded, the library budget remained flat, and library patrons were demanding increased electronic access. Five librarians gathered to determine a strategy to address the growing budgetary and access concerns. The Journals Committee was formed to assess the value and most appropriate format(s) of individual journal titles. A variety of methods were employed to assess a title's relative value and the faculty's preferred format. The results of this methodology were applied to the 2005 serials renewal process.
Results: Himmelfarb Library has maintained parallel collections of journals in print and electronic formats whenever possible. The cost of maintaining both formats has grown beyond what our budget can support. The outcome of the Journals@Himmelfarb Committee is a methodology to determine how to cut costs without sacrificing the collection's quality, which then was applied for the 2005 renewal. In a 900-title collection, slightly more than 700 titles were retained in print format. Approximately 175 titles were cancelled from the print collection. Of these, 150 were moved to an electronic format and about 25 titles were cancelled entirely. A minimal number of titles were dropped, but access to the electronic collection was improved. Although substantial changes were made to the collection, the changes did not translate into any cost savings.
Conclusions: The committee will continue to discuss the collection in terms of user needs, desired formats, and the long-term impact on the collection. For the future, the committee is considering canceling much of the remaining print collection, identifying a core of 100–150 titles to be retained in print format, and exploring methods for guaranteeing both the stability of the electronic collection and continued archival access to materials purchased.

139

Expert Googling: Best Practices and Advanced Strategies for Using Google in Health Sciences Libraries

Ammon S. Ripple, head, Reference Services, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: To identify, communicate, and encourage best practices for using advanced features of the Google search engine for information retrieval in health sciences libraries. This powerful search system, used properly, can be a valuable tool for professional librarians. It is important for librarians to know how to use search engines like Google as well as they do databases like MEDLINE.

Methods: Health sciences librarians, including individuals identified as expert searchers, will be informally surveyed via email distribution lists and by individual contacts for innovative and useful ways that health sciences information professionals use Google. Best practices for searching and key strategies will be identified based on these results and a review of Web resources and library and information science (LIS) literature. Results will be collated and presented on this poster and made available via handouts and a PowerPoint presentation posted on the Web.

Results: Google presents many interesting possibilities in terms of finding information that is not available using traditional library resources. There are many tips and tricks for making a Google search more effective at finding specific information. Some tricks involve finding word variants, ORing related or synonymous terms, searching for phrases more effectively than just with quotes, limiting results to selected domains (.edu, .org, .gov, etc.) and other syntax-specific strategies. Other strategies include using Google for verification of incorrect or incomplete citations; finding specific file types (e.g., PDF, Power-Point, Word, etc.); finding medical images; searching the contents of specific Websites (e.g., CDC, MLA, NLM, etc.); and finding biographical information. There are several online and print resources with advice, tips, and strategies for making the most of Google.

Conclusions: Google is a powerful tool that allows access to billions of Web pages. It is easy to type in a few words and get good results, and sometimes that is all one needs to do. Because of the vast size of Google, it is often important to achieve a more focused, efficient search that retrieves more useful information at the top of the results list. Applying professional searching expertise to Google searches makes it even more powerful.

141

Four Decades of Outreach: Stories Told and Lessons Learned

Julie K. Gaines, NLM second year associate fellow, and **Mary Moore**, director, Libraries, Briscoe Library, University of Texas Health Science Center–San Antonio

Objective: What themes emerge from interviews with those who have provided outreach to a particular US region over the past forty years? What lessons have they learned that might be useful to others providing outreach services?

Methods: This report on lessons learned from forty years of outreach was gathered from a qualitative analysis of interviews conducted with outreach providers. Interview questions were designed and reviewed with an oral history expert and a professor of qualitative research. Nine interviews were conducted during the fall of 2004 and the winter of 2005. The interviews were transcribed and coded into thirty-one nodes using NVivo software. The nodes were arranged into major categories to help the authors group data and draw conclusions.

Results: The resulting categories included: outreach definitions, types of services, target audiences, partners and mentors, personal characteristics, planning, operations, marketing, evaluation. Definitions of outreach have evolved over time. Outreach services seem also to have changed in target audience, types of services delivered and methods for delivery. Other aspects have been constant over the forty years. Outreach is still about building strong partnerships that can change and grow.

Conclusions: The key to successful outreach seems to lie in early community involvement in both planning and evaluation. Personal char-

acteristics of the outreach librarian are still of critical importance, as is mentorship for performing outreach services. This report confirmed that many of those performing outreach are too busy to document their lessons learned, so reports like this one can be helpful to those starting in the field.

143

A Partnership in Teaching Evidence-based Medicine (EBM) to Medicine Residents

Sherry Dodson, clinical librarian, and **Andrea Ryce**, National Library of Medicine associate fellow, Health Sciences Libraries; **Matthew F. Hollon**, assistant professor, General Internal Medicine; and **Christopher Wong**, chief resident, and **Genji Terasaki**, chief resident, Ambulatory Medicine, Department of Medicine; University of Washington–Seattle

Objective: The course introduces evidence-based medicine (EBM) principles and effective searching methods to first-year medicine residents. Through a combination of lectures and interactive methods, the residents learn to apply EBM to clinical encounters, as well as learn how to teach EBM to their medical students. A course Website allows the residency program to share and update the clinically appraised topics (CATs) with embedded searches.

Methods: The residents attend two rotations of a four-week EBM course for a total of twenty-four hours instruction led by faculty, chief residents, and librarians. A pretest of existing EBM knowledge is completed at the beginning of the first four-week rotation. Based on patient care questions in their clinics, the residents submit clinical questions on themes of therapy, prognosis, or diagnosis for further exploration in class. Five resources are used to search for evidence: TRIP, PubMed, Cochrane Library, Clinical Evidence, and PrimeAnswers. The searches and articles are then shared with the group, along with a discussion of search strategies and suitable indexing terms to use. The final product is a CAT on a clinical subject of practical use in clinical rotations. After completion of the course, each resident completes a posttest to assess learning outcomes.

Results: In the first 4 months of this program, residents who stated they were comfortable using Medical Subject Headings (MeSH) to search PubMed increased from 20% to 93%. Qualitative comments from participants indicated that the focus on both literature searches and critical appraisal was beneficial and favorable toward limiting time investment outside of the class. Participants were enthused to use resources of which they were not previously aware and found the presence of health sciences librarians highly useful.

Conclusions: A two-hour-per-week seminar with an emphasis on the collaborative development of practical skills is a useful model for teaching EBM to medical residents, and the synergy between clinical faculty and health sciences librarians improved the efficiency and quality of the literature search.

145

"If the Mountain Won't Come..." Wireless Lab to Teach Public Health

Dennis A. Pernotto, head, Integrated Advanced Information Management Systems/Program Evaluation; **Mararia K. Adams**, assistant director, Systems; **Donna F. Timm**, head, User Services; **Dawn M. Parker**, head, Access Services; and **Angela D. Anderson,** assistant systems librarian; Library, Louisiana State University Health Sciences Center–Shreveport

Objective: Building on a well-established partnership with public libraries and affiliated medical institutions, the health sciences library proposed and implemented a program to use its professional personnel and a portable wireless teaching lab to offer and deliver onsite National

Library of Medicine training to all public health employees (nurses, nutritionists, etc.) in the northern part of the state.

Methods: An area covering 50% of the state contains nearly 40% of its public health employees. This region contains only 3 metropolitan areas; 50% of its population and medical personnel are found in just one of these cities. Many public health employees (PHEs) are professionally isolated. However, all public libraries and affiliated medical institutions have T1 capability. Capitalizing on this opportunity, the health sciences library developed a wireless teaching lab (router and eight wireless computers) to be set up at off-campus sites within 25 miles of intended participants. Generally, 2 2-hour sessions are taught per day. These sessions usually concentrate on 1 specific medical specialty (e.g., nurses). Courses use a standard set of instructional materials. Practice exercises are individualized as needed. Quick reference guides are distributed, and evaluations are taken at the end of each session. Nearly 460 PHEs are targeted for lessons during this study.

Results: Since the original proposal and the implementation phase, discussions have proceeded with Public Health administrators of the three affected regions. New federal mandates have added to PHE workloads. The PHE workforce is spread over a wide geographical area. Many miles separate health care workers. It is difficult to gain unanimity on times and locations for training courses. Finally, to maximize wireless lab use and training staff time, it is best to teach classes with at least three-quarter capacity or six PHEs. Thought has already been given to a modification of the intended training process.

Conclusions: It has often been said that a battle plan seldom survives initial contact (with the enemy). The more ambitious the plan, the less chance of survival. It appears that this project will be no exception. Modifications are being considered, including a train-the-trainer approach and modifications to the delivery system.

149

A Six-state Collaborative Virtual Reference Project

Barbara L. Knight, AHIP, head, Public Services, Harley E. French Library of the Health Sciences, University of North Dakota–Grand Forks

Objective: This poster will report on a health sciences collaborative virtual reference project involving resource libraries in six states and three National Network of Libraries of Medicine (NN/LM) regions.

Methods: Setting/Participants/Resources: This project includes the Harley E. French Library of the Health Sciences in North Dakota; the Hawaii Medical Library in Honolulu; the Denison Memorial Library in Denver, Colorado; the J. Otto Lottes Library in Columbia, Missouri; the Spencer S. Eccles Health Sciences Library in Salt Lake City, Utah; the Hardin Library for the Health Sciences in Iowa City, Iowa; and the Carlson Health Sciences Library in Davis, California. Funding sources include: National Library of Medicine (NLM) grant 1 G07 LM007739-01 under the Internet Access to Digital Libraries program, NN/LM MidContinental Region grant N01 LM13514, NN/LM Greater Midwest Region, and the NN/LM Pacific Southwest Region.

Brief Description: We will describe policies and procedures that are being used to manage this collaborative project (including training and staffing), outline communication patterns, and identify patron groups.

Results: Measures of success include librarian surveys, user surveys, and usage statistics. We will outline the variety of communication tools and their effectiveness, discuss the feelings of an initial group of librarians involved in the project, and provide our measures of user satisfaction.

Conclusions: This is an evolving project with policies and procedures continuing to develop. Considerations include adding project partners and maintaining measures of user satisfaction.

Blogging at the Desk: Using Blogs to Coordinate Reference Service in an Academic Health Sciences Library

Michelle L. Zafron, senior assistant librarian, and **Stewart Brower**, coordinator, Information Management Education, Reference and Education Services, Health Sciences Library, and **Molly Ives Brower**, educational technology specialist, Science and Engineering Node Services, University at Buffalo, Buffalo, NY

Objective: Would a team Weblog (blog) be an effective method to communicate items of interest and technical problems between the members of the Reference and Education Services (RES) department at the Health Sciences Library (HSL) at the University at Buffalo?

Setting: The RES staff, finding that email and word-of-mouth messages had certain limitations, opted to utilize blogs as an alternative method of communication. The blog is used to communicate items of interest and technical problems with one another between desk shifts.

Method: Blogs use content-management tools to make adding information and links to a Web page quick and remarkably easy. Blogs are simple to set up and administrate, are convenient to access, can be archived, and can serve as a departmental portal to Web resources. RES investigated available blogging services, chose one that best served its needs, formulated guidelines for use, and implemented a departmental blog. This poster will detail methods for libraries to implement their own departmental blogs, including various blogging services and software options and suggest standard practices and areas for improvement.

Results: Currently, a number of services and software options are available. Cost, system requirements, and desired features all factor into making the best choice. After determining what best fit the needs of RES, guidelines were established, and RES librarians and student assistants were trained on the use of the blogging service. The implementation of the RES blog has been successful. It provides increased functionality, reliability, and convenience for reference communication. Added benefits include the archiving of posts and improved accessibility.

Conclusions: With some thought and planning, a team blog can serve admirably as an affordable and efficacious communication tool in a departmental library setting.

¡Magnífica Conexión! Outreach: The Library Road Show, Responding to the Needs of a Diverse Community

Danny O'Neal, AHIP, assistant director, Information and Outreach Services, and **Stephanie Smith**, graduate assistant, Shimberg Health Sciences Library, University of South Florida–Tampa

Objective: Our library developed an outreach program called the Road Show. With access to over 400 databases, we found that our researchers and faculty use relatively few of them and that many students were overwhelmed by the selection. Our goal was to improve our services by increasing their awareness of the resources and services supporting the specific curriculum and research needs of each college.

Methods: The Road Show travels to selected target locations, sets up in a high-traffic area, and presents educational materials, posters, brochures, guides, and bibliographic tools focused on the databases specific to the academic and health care needs of that group. Remote access information is also provided. For the students, the Road Show allows them to meet the librarians, ask questions, and learn about the information resources they will need to successfully complete their particular academic program. For the faculty, we demonstrate how the library, its resources, and librarians can provide academic support

for their curriculum. Our hospital and resident physicians in the local health care community are introduced to diagnostic and therapeutic information sources that can be used as tools for patient care. Each visit creates an atmosphere of awareness and an open exchange of questions and suggestions.

155

Celebrating Our Future in Work Diversity

Beverly Murphy, AHIP, assistant director, Marketing and Publications; **Virginia Carden, AHIP**, information services librarian; and **Hattie Vines, AHIP**, information services librarian; Duke University Medical Center Library, Duke University Medical Center, Durham, NC

Objective: The library is part of an academic health center that supports research, education, and patient care and is located in the geographic heart of the medical center community. The objective of this poster is to describe the use of a display to showcase library staff during National Library Week.

Methods: Each year, the library implements a marketing campaign in April during National Library Week to highlight the staff. This year's campaign focused on showcasing individual roles of staff members. The theme, "Value of Libraries & Librarians in the 21st Century: Find Your Fortune@Your Library," was graphically represented by the use of images of the individual faces of our staff, set in the framework of coins. Above each picture was a "sound bite" describing the role of the staff member @ your Library. The overarching message, "The Future Is @Your Library So Make Sure Your Library Has a Future," rounded out the display. One of the primary objectives was to implant in the minds of patrons that, without staff, there is no library and ultimately no future for the various facets of information. To further highlight staff, lanyards, personalized with staff members' departments, were given out at a library luncheon held in honor of the week.

Results: The display, which was located right inside the library entrance door, attracted interest from patrons and visitors to the library, as evidenced by their attempts to match display faces with staff they interacted with while in the library. To ensure greater exposure to the medical center community, the display was left up through August.

Conclusions: The library hopes through its marketing efforts that patrons will be more familiar with the diversity of staff and their contributions to the overall library experience.

157

Roadmap to Service Redesign: Innovation in Library Staff Development and Accountability

Sandra I. Martin, AHIP, assistant director, and **Deborah H. Charbonneau**, coordinator, Information Access and Delivery, Vera P. Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: To describe the redesign process by which an academic medical library developed a diverse solution in response to changing library needs and usage patterns by redeploying staff and merging existing service points. A key objective of the poster is to identify issues of redesigning work in the library environment, assessing and addressing staff development needs, and to share approaches used to generate staff involvement in the change process.

Methods: The goals of the service redesign initiative included putting a comprehensive staff development program into action to empower staff to provide timely, consistent customer service and to minimize unnecessary staff and patron runaround. An examination of patron expectations proved a further catalyst for revising our strategic mission and reallocating resources. A step-by-step "roadmap" or action plan for redefining multiple service points, staff empowerment, and training will be outlined. Our service redesign effort (1) identified issues surrounding creating a culture of change, (2) formulated a team-based approach to generate staff involvement, (3) identified a diverse range of staff training needs, (4) utilized a collaborative team-based approach to establish core competencies for customer service, and (5) developed and evaluated educational programming for library staff. Central to the success of this initiative was a collaborative team-based planning and service model consisting of professional and library support staff. This experience provided the library staff with a unique opportunity to become involved and to contribute to service improvement.

159

Using Online Focus Groups as a Method to Assess a Household Products Database

Colette Hochstein, technical information specialist; **Vera Hudson**, biologist; **Hua Florence Chang**, computer scientist; **George F. Hazard**, chemist; and **Phillip Thomas**, computer scientist; Division of Specialized Information Services, National Library of Medicine, Bethesda, MD

Objective: The Household Products Database <householdproducts .nlm.nih.gov> (HPD) provides easy-to-understand information on the potential health effects of ingredients contained in many common household products. The objective of the poster is to discuss lessons learned from using online focus groups versus other usability evaluation tools and to share how this feedback was applied to improve the resource.

Methods: To better understand how consumers and professionals use the HPD, two online focus groups were conducted with ten to thirteen users. Testing consisted of one group of health professionals and one group of consumers. Both focus groups included a mix of males and females. Members of the consumer group had identified themselves as the primary purchasers of at least two categories of household products and who consistently read and followed directions listed on those products. Members of the professional group were employed in the environmental, occupational, industrial, or public health field. To ensure familiarity with the resource, participants were asked to spend twenty to thirty minutes viewing and navigating the database and to complete a series of tasks on the site prior to the seventy-five minutes sessions.

Results: Feedback on the HPD was generally positive. Respondents found the database easy to use. Database strengths were identified as: easy to search and navigate, uncluttered design, unique content, and]; the ability to link to other NLM resources. While both groups (consumer and professional) found the database useful, some areas that require improvement included more comprehensive product listing and more consistent classification of the products.

Conclusions: The results of the online focus groups provided useful information for improving and enhancing the resource. More product categories and types of products in each category were added to the HPD. The size of the database has since increased from 4,000 to 6,000 brand-name products. Product categories were reexamined, and products were reclassified to achieve more consistency. For example, products in the Personal Care/Use category were reorganized according to the US Food and Drug Administration's Cosmetic Product Category Codes defined by the FDA's Office of Cosmetics & Colors. The online focus groups were helpful in assessing the strengths and weaknesses of the resource.

163

Learning, Mentoring, Leading: Preparing New Librarians for Professional Success

Shannon D. Jones, education services outreach librarian, Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond; **Becky Hebert**, specific populations outreach coordinator, National Network of Libraries of Medicine, Southeastern Atlantic Region, Health Sciences and Human Services Library,

University of Maryland–Baltimore; **Tammy Mays**, consumer health coordinator, National Network of Libraries of Medicine, Greater Midwest Region, Accountingt Department, Library of the Health Sciences, University of Illinois–Chicago; and **Cindy A. Gruwell**, associate librarian and coordinator, Instruction, Biomedical Library, University of Minnesota–Minneapolis

Objective: An exploration of an innovative program that addresses leadership development needs of new and entry-level librarians of color
Methods: Statistics from the American Library Association (ALA) indicate that 2009 will be a pivotal year in libraries as 25% of the workforce will begin to retire, including 40% of the current library directors. Hence, a critical issue facing our profession is ensuring that the new and middle management librarians are well equipped with the knowledge and skills needed to assume leadership roles. In particular minority librarians, who reflect the growth of ethnic diversity in the United States. Associations such as the Association of Research Libraries, ALA, and the Medical Library Association have implemented programs focusing on leadership development; however, most target seasoned librarians. This poster focuses on the need to prepare new librarians in the areas of general professional skills, leadership, and mentoring. We highlight one university's approach to preparing new minority librarians for leadership in the profession.
Results: Participation in this institute has provided us with the opportunity to**:**
• attend leadership seminars that included training in professional skill areas like grant writing, instructional design, and outcomes assessment and evaluation
• obtain knowledge in key areas like organizational culture, group development, and effective problem solving
• gain a community of peers who will provide mutual support and encouragement
• identify our personal career visions and professional strengths and talents
• gain skills that have enhanced our performance at our home institutions; and
• reinforce our enthusiasm for the profession and future careers options
Conclusions: This institute is the only one of its kind in the country focused on preparing new librarians for leadership. Although it targets new librarians of color, all new librarians would benefit tremendously from participating in an opportunity like this. Other institutions should consider establishing similar institutes for new librarians.

165

Increasing Faculty Knowledge of Issues in Copyright and Scholarly Communications

Theodora A. Bakker, National Library of Medicine Associate fellow; **Janette Shaffer**, assistant director, Client Services; **Tracie Frederick**, electronic resources librarian; and **Jane L. Blumenthal, AHIP**, assistant dean, Knowledge Management, and library director; Dahlgren Memorial Library, Georgetown University, Washington, DC

Objective: It is essential that faculty have a comprehensive understanding of intellectual property rights and restrictions as they use copyrighted material in their teaching and produce copyrightable material through their research. Using multiple forms of outreach and education, we seek to increase faculty knowledge on issues of copyright, including those issues within the larger scope of scholarly communications.
Methods: This case study illustrates our multifaceted effort to educate faculty on copyright issues. To facilitate faculty education of copyright issues, we used instructional opportunities designed to meet perceived information needs while achieving additional education goals for copyright. Through a medical school committee appointment, we arranged for a session addressing fair use issues and further addressed general copyright issues. To call faculty attention to copyright restrictions when they submit material for reserves, our electronic reserves procedures highlight copyright requirements and provide information links. As part of a grand rounds series, we offered a course on scholarly writing and publishing, with a focus on issues of the transfer of copyright. And we offered a university-wide scholarly communications symposium series, which dealt with the larger issue of scholarly communications and dealt directly with the impact of the publishing process on intellectual property rights.
Results: We increased faculty knowledge and awareness of intellectual property rights of their own works as well as works created by others and the impact of copyright waivers on those rights. We also facilitated an increase in knowledge of the importance of copyright waivers and permission for use and further clarified understanding of fair use issues in education. Additionally, we introduced faculty to alternatives in publishing.
Conclusions: We have found a need for ongoing education on issues of copyright. To maximize effectiveness, education efforts should be incorporated at the point of need (e.g., when putting material on course reserve). Increasing awareness during these encounters allows for more effective outreach during copyright-focused events (e.g., scholarly communications symposia).

167

Partnering for Patient Empowerment Through Community Awareness

Mark Berendsen, education librarian, and **Linda J. Walton**, associate director, Galter Health Sciences Library, Northwestern University, Chicago, IL; **Mary L. Gillaspy**, manager, Health Learning Center, Northwestern Memorial Hospital, Chicago, IL; **Lorri Zipperer**, cybrarian, Zipperer Project Management, Evanston, IL; and **Roxanne J. Goeltz**, president, Consumers Advancing Patient Safety, Chicago, IL

Objectives: We have created a model for developing community partnerships between health care institutions and public libraries to educate consumers and librarians on patient safety awareness. Our goals are:
• to improve communication among key players regarding patient safety and health care information so that the best quality care is provided; and
• to improve consumer awareness about patient safety and healthcare resources
Methods: Patient safety is emerging as a major public health challenge, but there are few organized efforts to deliver safety information to the public or increase consumers' levels of awareness of and knowledge about their roles in improving safety. To disseminate information we are:
• creating partnership programs between public libraries and health care institutions in five communities in various settings including rural, urban, and suburban locales;
• providing patient safety community awareness programs in public libraries for consumers;
• developing a train-the-trainers program for public and consumer health librarians;
• creating a tool kit that can be used by libraries for developing a patient safety partnership and awareness program in their community;
• creating a display that can be loaned to libraries and hospitals interested in promoting patient safety; and
• developing and maintaining a patient safety Website.
Results: Partnerships between public libraries and health care institutions have been established in five communities and patient safety presentations have been given at a small town library and an inner city library. Presentations are scheduled in three more communities. Consumer health resources training for public librarians also have been given with more sessions scheduled. The tool kit includes modules for the training, handouts, and bibliographies. The Website is live and the kiosk has been on display at four libraries.

Conclusions: The model is successful and needed. Evaluation forms and anecdotal feedback has been largely positive. Partnering for Patient Empowerment through Community Awareness (PPECA) has been contacted by several libraries and hospitals interested in developing a similar program in their community. The evaluation and facilitator's guide will strengthen the model. PPECA staff has or will present at the Chicago Patient Safety Forum Annual Meeting, the Seventh Annual National Patient Safety Foundation's National Patient Safety Congress, Medical Library Association, and the Metropolitan Chicago Healthcare Council.

169

Harvesting the Best: Evaluation of Clinician Handbooks on Medicinal Herbs and Supplements

Julia S. Whelan, AHIP, senior librarian, Outreach Services, Treadwell Library, Massachusetts General Hospital–Boston, and **Lana Dvorkin**, acting director, and **Samira Timarac**, intern, Center for Complementary and Alternative Pharmacotherapy, Massachusetts College of Pharmacy and Health Sciences–Boston

Objective: To develop criteria for evaluating the quality of tertiary literature on medicinal herbs and dietary supplements. To apply these criteria to selected handbooks and quick references intended for clinicians.
Methods: The last two decades have seen a steady growth in patient use of herbs and dietary supplements (H/DS) and a parallel proliferation in the literature published on this subject. Clinicians have many references to choose from and little guidance in making selections. The authors established as a standard that complete H/DS entries should include the following categories: botanical names/synonyms, basic pharmacology, dosage forms with adult/pediatric doses, therapeutic uses-both popular and evidence based, contraindications (including pregnancy and lactation), adverse reactions, interactions with drugs, interactions with laboratory tests, and references to current primary literature. Selected handbooks and quick references were evaluated against these standards. In addition, differences in inclusion criteria and bias were analyzed by comparing entries for garlic.
Results: Based on the objective criteria created by the authors, we evaluated eight handbooks. The four that received the highest ratings were: *Natural Standard Herb and Supplement Handbook: The Clinical Bottom Line* (Basch EM, Ulbricht CE); *Mosby's Handbook of Herbs and Supplements and Their Therapeutic Uses* (Bratman S, Girman AM); *Mosby's Handbook of Herbs & Natural Supplements* (Skidmore-Roth L); and *Professional's Handbook of Complementary & Alternative Medicine* (Fetrow CW, Avila JR). The information presented in these four books was balanced, referenced, and more complete than in the other handbooks.
Conclusions: Herbal information resources can be evaluated using an objective analysis of the subject categories of importance to clinicians. Commonly used herbal handbooks were evaluated, and the best resources of this kind for a busy health care practitioner were identified.

171

Recruiting and Mentoring the Next Generation of Health Sciences Librarians

Shannon D. Jones, education services outreach librarian, and **Lynne Underwood Turman**, Head, Collections, Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond; **Melanie Norton**, interlibrary loan coordinator, Health Sciences Library, University of North Carolina–Chapel Hill; and **Cynthia Burke**, reference librarian, Reference Section, National Library of Medicine, Bethesda, MD

Objective: To recruit library science students and paraprofessionals for careers in health sciences librarianship.

Methods: In 2004, the Mid-Atlantic Chapter of MLA (MAC) implemented a recruitment initiative aimed at introducing library science students and paraprofessionals to the diverse opportunities in health sciences librarianship. This initiative was developed largely in response to statistics from the American Library Association that indicate that our profession will face significant shortages in 2009, as 20% of the workforce will begin to retire. As a result, recruiting and mentoring new professionals are two of the most critical issues facing our profession. The poster will highlight our approach to recruiting and mentoring the next generation of health sciences librarians in our region. This initiative has multiple objectives focused on developing 21st century health information professionals. These include (1) recruiting new professionals, (2) promoting MLA chapter membership, (3) encouraging leadership in the profession, (4) promoting mentorship, and (5) providing leadership opportunities for our current members.
Results: Initiatives to recruit individuals for careers in health sciences librarianship do not conform to a one-size-fits-all method. Successful recruitment requires multiple methods. As a result of our efforts, we have:
• received a "Health Sciences Librarianship" promotion award from NN/LM-SEA
• developed a framework for recruiting individuals in our region
• debuted the MAC/MLA Conference Scholars at our 2004 meeting
• identified mentoring opportunities for chapter members
• sponsored several "So You Want to be a Medical Librarian" programs
• introduced students to NLM, MLA, MAC/MLA
• encouraged students to use resources from MLA
Conclusions: Our initial recruitment efforts have focused on recruiting library and information science (LIS) students for careers in the profession. In the future, we will explore using the "Grow Your Own" theme to focus our efforts to include paraprofessionals throughout our region. We will continue to enhance this initiative to ensure program effectiveness and success

175

"Reaching Out to Seniors at Multiple Points of Care": Partnerships to Provide Electronic Access to Health Information from the Pacific College of Oriental Medicine

Naomi C. Broering, AHIP, FMLA, dean, Libraries, Medical Library; **Stacy L. Gomes**, academic dean, Administration; and **Gregory A. Chauncey**, program manager, Medical Library; Pacific College of Oriental Medicine, San Diego, CA; **James Lovell**, director, Third Avenue Charitable Organization, First Lutheran Church, San Diego, CA; and **Kelli Parrish-Lucas**, program director, Senior Center, Florence Riford Senior Center, La Jolla, CA

Objective: This presentation describes a senior health project between three diverse San Diego institutions, which began in September 2004 as an eighteen-month outreach program funded by the National Network of Libraries of Medicine (NN/LM). The library's goal is to provide electronic access to health information directly at a senior clinic and senior center.
Methods: The project partnership includes the Pacific College of Oriental Medicine's medical library, a community senior center, and a free church-based senior health clinic. The library spearheads the program by taking a variety of information services directly to the two senior sites. Unique features about this program include the integrative and alternative medicine approach incorporating acupuncture and massage therapy topics with use of National Library of Medicine (NLM) and National Institutes of Health (NIH) resources of a full array of medical, public health, and drug information; use of experimental technology for wireless network communication with lap tops at the senior clinic; customized training seminars at the senior center; and services for two distinct consumer user populations (low income and middle

class seniors from diverse ethnic backgrounds). All need help in finding answers to their medical questions. This experience is showcased with printed posters slides and photo images.

Results: Achievements reported for the first eight months include acquiring appropriate equipment; preparing workbooks; marketing publicity and brochures, staff recruitment, and training; conducting six weekly workshops, adding senior health links to the library Website; and gathering evaluation data.

Conclusions: Lessons Learned: (a) Contact other consumer health librarians. (b) Order computers with large screens, keyboards, and headphones. (c) Hire sufficient staff for one-on-one instruction. (d) Remain flexible to meet user needs. (e) Work closely with NN/LM staff for tips and assistance.

Future Plans: Complete the entire project period, evaluate and consider future extension, and write articles and reports.

177

Action through Librarian Advocacy: Olyn Ruxin and the Health Sciences OCLC Users Group (HSOCLCUG)

Dan Kniesner, chief cataloger, Library Systems and Cataloging, Library, Oregon Health & Science University–Portland, and **Mary J. Holt**, monographs librarian, Rudolph Matas Medical Library, Tulane University Health Science Center, New Orleans, LA

Introduction: At the 1974 MLA annual meeting in San Antonio, medical cataloger Olyn Ruxin presented a paper on unique problems of the early health sciences libraries that had joined OCLC. The groundswell of interest that she encountered among MLA attendees led her to help form the Health Sciences OCLC Users Group (HSOCLCUG) in 1975.

Objective: This poster will highlight heroic achievements by Olyn Ruxin and other health sciences librarians in the OCLC user community over the past three decades. It will then present problems and opportunities that health sciences OCLC users are facing today.

Methods: The authors will provide historical background based on the thirty-year HSOCLCUG archives. A recently formed MLA/TSS Task Force is exploring how MLA can build on the work of HSOCLCUG and identify opportunities for health sciences advocacy with OCLC and standards organizations.

179

"Or Perish in the Attempt": Medical Adventures of Lewis and Clark and the Corps of Discovery, 1804–1806

Lisa Oberg, head, Information Services, Health Sciences Library, and **Gail Kouame**, consumer health coordinator, National Network of Libraries of Medicine/Pacific Northwest Region, University of Washington–Seattle

As the United States celebrate the 200th anniversary of the Lewis and Clark expedition, recognizing the significance of the medical aspects of the journey is an important part in honoring the advancements and discoveries they made along the way. The corps faced incredible odds during their 2-year overland trek and encountered many unknown factors including wilderness, weather, disease, wildlife, and Indians. The absence of a physician on the trip meant both Meriwether Lewis and William Clark were called upon to serve in this capacity, particularly Lewis who had received brief medical training. Lewis faced a daunting task in preparing the corps' traveling pharmacy, which required him to anticipate what would be needed for the many unknown variables of the excursion, as well as its uncertain length. This poster will explore the medical knowledge available to Lewis and Clark in the early 19th century: how they prepared for the journey, treated members of the expedition throughout the trip, and adapted to the changing environment. Both Lewis and Clark kept extensive journals that provide important insight into the day-to-day challenges of their travels, as well as the routine and unusual illnesses and injuries they experienced. The expedition is notable in that only 1 man died out of the 33 permanent members of the corps. Lewis and Clark overcame one of the greatest challenges of all time: surviving the rigors of their journey in their quest to discover a Northwest Passage to the Pacific Ocean, traveling more than 4,100 miles in 2 years.

181

Everyday Heroes: The Papers of James Carmichael and His Son Edward Carmichael of Fredericksburg, Virginia

Bart Ragon, assistant director, Library Technology Services and Development; **Joan Echtenkamp Klein**, Alvin V. and Nancy Baird curator, Historical Collections; and **Steve Stedman**, Webmaster, Library Technology Services and Development; Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Objective: The Carmichael collection, purchased by the University of Virginia Library in 1998, consists of letters, notes, and receipts written to James Carmichael and his son from 1819–1830 and a daybook dated 1816–1817. The Health Sciences Library worked closely with the University's Electronic Text Center and Rare Materials Digital Services department to scan, digitize, and create finding aids for the online exhibit.

Methods: The letters include references to medical treatment, the prescription of medicine, and urgent requests for visits from the perspective of the patient, family, and slaveowner. The collection was transcribed and marked up using the text encoding initiative (TEI) standard of extensible markup language (XML). A custom metadata schema was developed, and each document was individually evaluated to ensure that the collection could be accessed from a variety of entry points either predefined or by the viewer. To increase relevance for browsing and searching a thesaurus was created that links the 19th century treatment and complaint terms, as described in the original documents, to the 21st century Medical Subject Headings (MeSH) equivalence.

Results: This project is the next step in the development model created for making archival and unique materials owned by the Claude Moore Health Sciences Library more widely available. This collection can be viewed at etext.lib.virginia.edu/healthsci/carmichael/.

Evaluation: The project team worked closely with the University of Virginia's Electronic Text Center, Rare Materials Digital Services, and selected faculty members throughout the project to ensure scholarly needs were met. A detailed final report can be viewed on the collections Website.

183

Christopher Reeve Was a Superman

helen-ann brown, AHIP, information services librarian, Weill Cornell Medical Library, Weill Medical College of Cornell University, New York, NY

Objective: This poster will chronicle two important eras of Christopher Reeve's life, illustrating his truly superhero contributions.

Methods: With illustrations and accompanying text, this poster will chronicle Christopher Reeve's career as Superman and his career as a paralyzed man with a fighting spirit to live and champion research, so that he and others like him may walk and fly again.

Results: As Superman, Christopher Reeve gave us someone to look up to and cheer for. We saw how courage and concern for our fellow citizenry caused good things to happen. As a tireless champion for those stricken by paralysis, including himself, he showed his fortitude and determination to have his voice heard.

Conclusions: Superman was a hero. History will tell us Christopher Reeve's efforts to advance research in overturning paralysis with or without stem cells was a very valiant effort.

Poster Session: Even Numbers

Tuesday, May 17, 4:30 p.m.–6:00 p.m.

2

Library Support of an Academic Medical Center's Institutional Animal Care and Use Committee (IACUC)

Marina Chilov, monograph collection development and reference librarian, and **Konstantina Matsoukas,** head, Reference, and education coordinator, Augustus C. Long Health Sciences Library, Columbia University Medical Center, New York, NY

Objective: Illustrate how building a communication network between an academic medical center's library and institutional animal care and use committee (IACUC) leads to specialized reference services that aid institutions in meeting the information requirements of the Animal Welfare Act. (This act requires investigators to submit with their experimental protocol and a search strategy showing that they have performed a comprehensive search of the literature for alternatives to animal use in their research.)
Methods: To facilitate investigators' understanding of the requirements, our institution's IACUC organized a one-day Animal Welfare Information Center (AWIC) training seminar. The AWIC specialist and medical center librarians worked together prior to the seminar to determine what databases and resources researchers had access to via the medical center's library. The AWIC specialist recommended to the director of IACUC to incorporate the librarians into the afternoon hands-on searching segment of the course, where they highlighted the library's resources and services. During the twelve months prior to the IACUC seminar, no requests for help with searching for alternatives were recorded by the Reference Department. Within two days of the seminar, the Reference Department recorded its first request. Demographic information about users requesting assistance with searching for alternatives to animal use in research was collected and analyzed.
Results: Over the 12 months subsequent to the IACUC seminar, the library received 34 requests for assistance with searching for alternatives. Twenty of these inquiries were made within the first 6 months. Forty-seven percent of the inquiries were made by faculty members, and 29% originated from associate research scientists and postdoctoral fellows. Ffiteen percent of inquiries were made by senior lab technicians, administrative assistants, and project coordinators on behalf of faculty members. Only 1 graduate student made an IACUC-related inquiry. Inquiries were made by researchers from a wide variety of departments, the highest number of requests coming from dermatology (21%) and medicine (15%).
Conclusions: Research faculty and research scientists are two demographic groups that are not traditionally big users of specialized library search services. Via referral from IACUC, researchers who need assistance developing search strategies will contact a librarian. Networking with IACUC is an effective way for libraries to boost their expert search services.

4

Reaching Out to All: Medical Informatics as Service to Diverse Populations in an Academic Medical Center

Patricia Wilson, associate director, Public Services, and **Richard Billingsley**, information and instruction coordinator, Himmelfarb Health Sciences Library, The George Washington University, Washington, DC

Objective: Part of the university medical center's mission is to provide education, services at the point of need, and outreach to the surrounding community. To achieve this goal, the library has increased program offerings and delivery locations to better serve an ever-expanding and diverse population.
Methods: Librarians are providing instruction in library resources. Successful efforts include integration into the instructional program at the point of need. The problem-based learning (PBL) curriculum, the research skills sessions, the information literacy classes, and the evidenced-based medicine curriculum are examples. Librarians serve on the Patient Education Committee and teach health sciences reference and health sciences librarianship courses at a local university. We serve the community through our PARTNERS program. New initiatives include the School Nurse Information Outreach Project and the Clinical Informationist Program. The demands on staff and time have increased, necessitating a reevaluation of the roles and responsibilities of all staff members.
Results: The library has provided services to 18 constituencies outside of the library environment. Ten areas in the university, ranging from medical and public health faculty and students of the School of Law, have received information and instruction. Five areas in the hospital have received a variety of services. Himmelfarb has educated and provided information in our local community through the Washington, DC, nonprofit clinics, the school nurses of Arlington, VA, and library school students at the Catholic University of America. Himmelfarb librarians participated in 149 education sessions, interacting with 1,349 students and coworkers. These interactions have used 409.5 librarian hours.
Conclusions: The library is integral to the medical center's mission. We have successfully networked with constituencies in the medical center, the university, and the community. The librarians have moved instruction to the point of need in the curricula. We instruct and provide information in hospital departments and to organizations in our community. It is a continuing challenge to move staff out of the library to pursue these initiatives while maintaining more traditional services in the library. The more we do, the more we are asked to do, but this is beneficial to meeting our goals.

6

Tracking Where Institutional Authors Publish

Virginia R. M. Carden, AHIP, information and education services librarian, and **Patricia L. Thibodeau, AHIP**, associate dean, Medical Center Library, Duke University, Durham, NC

Objective: Medical school administrators are seeking ways to measure faculty productivity and benchmark against peer institutions. One traditional measure of faculty productivity has been publications. The library in conjunction with the dean's office began a project of identifying in which journals faculty publish and benchmarking against peer institutions for selected journal titles in each field.
Methods: The library selected the ISI citation indexes, since they allow for searching by institutional affiliation. Initial strategies were developed for identifying all permutations of the institutional name and affiliation in the databases. The search strategies were run against three complete years of the literature. The results were placed in an EndNote database for screening and further tagging. The plan was to update the database on an annual basis. The next phase of the project was to benchmark publications in specific journal titles against clinical and basic sciences departments at other institutions. In addition to a core list of highly rated scientific and clinical journals, the library worked with the vice dean of research to identify journal titles in each specialty area. ISI impact factors were used as a starting point, but advice from librarians helped determine the final list.
Results: After running initial searches, changes were made to the strategies for identifying all the variations for institutional listings and research was conducted on each peer to identify the various designations for comparable departments and divisions. Once the large EndNote database was populated with citations, spreadsheets were generated to provide an overview by department, peers, and journal titles. The deans found the results so useful that they have added a sixth core title to the

search for 2004 articles and asked that up to three highly ranked titles be found for each department and division.

Conclusions: Librarians using a standard citation database, such as ISI Web of Science, can provide academic health center administrators with valuable information on faculty productivity. In addition to identifying journal articles produced by institutional authors, search strategies can be used to generate benchmarking data for comparison with peer institutions.

8

Online Current Awareness: An Overview of Options and Strategies

Ammon S. Ripple, head, Reference Services, and **Linda M. Hartman**, reference librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: To review and present options and strategies for providing and marketing online current awareness services. Many information providers offer alerting services, which alert users to new information based on predefined search statements, individual journal titles, and/or new citations to a given article. These personalized services are more important than ever, increasingly more sophisticated, and very appealing to many library users.

Methods: Review major online systems used in health sciences libraries (e.g. Ovid, EBSCOhost, PubMed, and ScienceDirect) for current awareness options they provide. Synthesize and analyze current awareness services available from these major systems. Provide some preliminary analysis of the quality, usefulness, and effectiveness of these services based on user feedback from a small focus group of faculty users. Based on feedback elicited from librarians via email lists and a review of the literature, present strategies for marketing these services to individuals and groups among user populations in health sciences libraries.

Results: Online current awareness services can be a good "hook" for marketing library services. Certain groups of health sciences library users place a high value on staying current with the literature and browsing certain journals. In addition, newly available citation alerts are very popular. However, many users are not aware of these features without someone telling them about them. In spite of enthusiasm for the concept and potential of online current awareness, some users are confused or overwhelmed by the many different services and features. Some users have difficulty creating effective search strategies and end up missing important articles or retrieving too much. The librarian has a role in helping the user to create effective search strategies.

Conclusions: Marketing and instruction are essential for promoting widespread, successful use of online current awareness services, which can help promote the overall value of the library to its parent organization. Being familiar with these services and marketing them effectively can help librarians reach out to library users and keep them connected to both the research literature and the library.

10

Reaching Out to Serve the Diversity Within

Julie C. Whelan, AHIP, senior librarian, Outreach Services; **Carolyn J. Paul**, senior librarian, Access Services; **Elizabeth Schneider, AHIP**, director; **Carole J. Foxman, AHIP**, coordinator, Education; and **Martha E. Stone**, coordinator, Reference Services; Treadwell Library, Massachusetts General Hospital–Boston

Objective: This poster will demonstrate how the staff of a hospital library is "Reaching Out to Serve the Diversity Within." It will highlight library programs and activities that met the diverse needs of the hospital's multicultural workforce. These library-led activities are aligned with the hospital's strategic plan that predicts a dramatic increase in its workforce diversity.

Methods: Library staff worked on several projects that got them "out of the library" and serving the needs of people who are not the typical users of a major teaching and research hospital library. In doing so, the library expanded its role and its user population. Projects include:
• Community Languages grant that serves hospital interpreters, the staff English for speakers of other languages (ESOL) program and community health centers
• Library director on hospital's Internal Communication Committee
• Customized teaching sessions for hospitals' multicultural groups and associations
• Participation in hospital's Latino Heritage Month celebration
• Development of content for hospital's health disparities/cultural competence Web page

Results: Increasing circulation statistics, feedback from ESOL faculty, and a survey of Interpreters demonstrate that the Community Languages resources for learning English, citizenship preparation and medical translation fill an information niche. The multicultural college interns program, ESOL classes, and multicultural employees organization welcomed customized teaching sessions, presentations, and library tours. As a cosponsor of the hospital's Latino Heritage Celebration, the library attracted 150 people to its book display and slide presentation written in English and narrated in Spanish. The director is actively engaged in quarterly meetings of the Internal Communications Committee. The library contributed embedded searches for the health disparities/cultural competence Web pages. Although these links were dropped when the Web pages were revised, another online project on cultural and health care values reflecting the patient population is under development.

Conclusions: The library has reached a population of hospital employees who previously did not use the library. The library continues to support the hospital's strategic goal to address health disparities, improve cultural competence, and support the information needs of a diverse workforce.

12

Library in a Box: Reengaging with Users via a Scholarly Circuit Librarian Program

Shannon D. Jones, education services outreach librarian; **Barbara Allen Wright, AHIP**, reference services librarian; **Jodi Koste**, head, Resources and Operations; **Virginia Stone**, education services librarian; and **Catherine Canevari**, head, Education and User Services; Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond

Objective: This poster will highlight an outreach initiative our library implemented to provide services to affiliated users outside of the library.

Methods: Technology has made the task of conducting research from remote locations easy, now that a variety of library resources and services are available electronically. This has also resulted in fewer people visiting the library's physical location. So how do you respond when your Web statistics continue to increase while your gate counts steadily decline? What do you do to reengage those users who do not want to come to you? You pack your services in a box and go to them. Our library created a Scholarly Circuit Librarian Program (SCLP) to respond to the challenge of providing services to users outside of the library. The SCLP program takes librarians out of the library to high-traffic public areas on campus such as a school or departmental lounge, the campus gymnasium, or the hospital to respond to user questions and promote library services.

Results: SCLP allows us to re-engage users who lack the time to visit the library. Program benefits include
• Increased library visibility
• Increased awareness and interest in library services
• Increased options for interacting with users

• Increased opportunities for promoting library services
• Improved communication with users
• Demonstrates our willingness to work more closely with users
Needs and infrastructure vary greatly from school to school. Challenges we faced include:
• Selecting ideal locations and times
• Allocating staff to support this and existing services
• Promoting and marketing to different audiences
• Adjusting program objectives based on constraints

Conclusions: Despite these challenges, continuing this initiative is worthwhile. We have received positive feedback from our users indicating the need for continued support of the program. Additional project enhancements and increasing the number of library staff involved could help increase the program's effectiveness.

14

Healthy Adventure: A City Urban League Office and the University Libraries Collaborate to Eliminate Health Disparities

Shannon D. Jones, education services outreach librarian, Tompkins-McCaw Library for the Health Sciences; **Patricia A. Hammond, AHIP**, CHEC librarian, Community Health Education; and **Jean Shipman, AHIP**, director, Tompkins-McCaw Library for the Health Sciences; Virginia Commonwealth University–Richmond

Objective: Through partnership with the local city Urban League office, our consumer library established a diabetes education center focused on improving the health outcomes of African American adults living in the inner city. A collection of consumer-level health information covering all aspects of diabetes was created to address the health literacy needs of the intended population.

Methods: In 2002, we joined with our local urban league office to apply for a seed grant from the National Urban League (NUL) Office to become a Regional Health Training and Technical Assistance Center for the NUL's "Lift Every Voice" program on diabetes education. Our library would serve as the diabetes education center. Grant funding was provided to enhance the library's existing diabetes collection. Librarians selected culturally sensitive and easy-to-read diabetes materials in addition to creating a Web page featuring links to local and national diabetes resources. Librarians have also provided resource center tours and ongoing consultation to the NUL and other regional Urban League staff. This poster will highlight the project implementation, which has evolved into a national model for minority diabetes education.

Results: Partnership led to the following benefits:
• Received additional fiscal support to enhance existing diabetes collection
• Identified culturally sensitive, easy-to-read diabetes materials
• Impetus to enhance diabetes Web page <www.vcuhealth.org/chec/health/diseasesandconditions/diabetes.html>
• The Community Health Education Center (CHEC) has a prominent presence on the Urban League of Greater Richmond (ULGR) Website
• Provided onsite tours and consultations for other regional Urban League Offices and staff
• ULGR chief executive officer became of a member of the CHEC Advisory Team

Conclusions: Working collaboratively, health sciences library staff and an Urban League representatives obtained grant funding, developed a Web page, and acquired print and audiovisual resources targeted at minorities living diabetes. Further plans include acquiring additional resources for the collection and promoting both the Web page and collection to minorities throughout the region.

16

Showing the Money: Utilizing Dollar Values to Show a Library's Value and Increase the Budget!

Julia M. Esparza, manager, Library Services, and **Donna M. Record**, library specialist, Health Science Library, Deaconess Health System, Evansville, IN

Objective: To evaluate the effect of assigning a dollar value to services provided by the Deaconess Health System Library.

Methods: Using dollar values listed in the *Wall Street Journal* [PARKER-POPE T. Research for hire: firms help patients find latest cures for chronic illnesses. Wall St J (East Ed) 2002 Nov 26;240(105):D1], the library assigned values to each service normally provided to customers. The library then created a data collection section on the information request form. Dollar values were tracked by the library on the internal budget as "Volume - Other" to show usage.

Setting: A small hospital library with 1librarian and 1.7 paraprofessionals serving a 500-bed health system. Prior to 2002/03, no usage statistics were collected.

Population: All professional and consumer users of the health system.

Results: Using data collected in 2002/03, the library provided over $74,000 worth of services. By employing this dollar value, the library received a 13% budget increase in 2003/04. For the 2004/05 budget cycle, the library demonstrated a utilization of $109,000 worth of services. As a result, the library obtained a budget increase of 8% in 2004/05.

Conclusions: In a time of shrinking budgets, providing dollar values in a systematic and consistent manner demonstrates value that can be used as a bargaining tool during budget negotiations. Since the Deaconess Health System Library has been tracking dollar values, the library has seen a budget increase of 21% in the last 3 years.

18

Developing and Sustaining a Web-based Library Newsletter

Daniel G. Kipnis, education services librarian; **Elizabeth G. Mikita**, education services librarian; and **Anthony J. Frisby**, director, Education Services; Academic and Instructional Support and Resources, Thomas Jefferson University, Philadelphia, PA

Objective: The JEFFLINE Forum, Scott Library's attempt to resuscitate the traditional library newsletter by employing the technical advantages and increasing presence of the Web, debuted in October of 1999. The fifth anniversary of the JEFFLINE Forum seemed like a good time to look back at its evolution and to examine some of the challenges inherent in developing and sustaining a library newsletter.

Methods: In 1999, library director appointed a working group to develop an online newsletter to highlight and support:
• Library news and information (primary focus)
• Educational initiatives and activities involving the participation of library and Academic and Instructional Support and Resources (AISR) staff members (secondary focus)
• Faculty and student projects related to medical informatics and other health care literature
• Encourage and recruit university and hospital faculty and staff to contribute relevant articles (tertiary focus)
This newsletter staff addressed the following challenges:
• Building and tracking readership
• Soliciting feedback
• Maintaining staff interest and increasing efficiency
• Recruiting "outside" authors
• Incorporating technology

Results:
• Made contributions guidelines simple and easy and recruited new authors by tapping campus connections and workshop attendees

• Established ties with library staff to contribute recurring series of articles (e.g., History Corner, New Books, PowerPoint Tips, Search Tips, InfoBits, Photoshop Phanatic)
• Utilized new technology for development, user-friendly printing, online polling, and video demonstrations
• Emailed announcements of a new issue release to all patrons with an email address in the library's security system and to other users who "opt" in
• As of February 2005, over 1,500 Jeffersonians and non-Jeffersonians subscribe to the JEFFLINE Forum email list

Conclusions:
• Allowed readers to communicate with authors and to discuss and rate topics
• Expanded use of interactive demos, which are popular with readers
• Recognized that the JEFFLINE Forum is time consuming to edit and assemble—approximately twenty-five hours per issue (not including writing time)—even with increased experience and efficiency.

20

Use of Feedback in Designing an Environmental Health Information Mapping System

Colette Hochstein, technical information specialist, and **Martha Szczur**, deputy associate director, Division of Specialized Information Services, National Library of Medicine, Bethesda, MD, and **Chris Krahe**, systems architect, Aquilent, Laurel, MD

Objective: TOXMAP <toxmap.nlm.nih.gov> uses maps of the United States to help users visually explore environmental health information. This poster will discuss how feedback was used to improve TOXMAP by enhancing its usability and by keeping its presentation of health data readable and understandable.

Methods: Almost every day, concern about a particular chemical facility or chemical is mentioned in the news; health professionals are often consulted by their own or by other institutions, by the press, and/or by concerned citizens, to provide accurate, relevant information. TOXMAP, a Web-based mapping resource, can be an ideal reference in such cases. Maps are a powerful way of visualizing data, but presenting geospatial data to users can be complex. To guide us in approaching this challenge, we collected feedback directly from potential users via a combination of online exercises and focus group feedback sessions. The poster will also discuss integration and overlay of data, linking to other relevant environmental health resources, use of "mock-ups" to present potential feature changes, and follow-up with more formal usability testing to confirm changes in design.

Results: Feedback about TOXMAP was positive. Suggestions for improvement included specific navigation changes (i.e., improving "panning" feature and a "print map" feature); data sets inclusion (i.e., adding income, age, cancer and mortality, diabetes, daytime population); adding views (i.e., water and/or air and/or land release views); ability to download data into a text or spreadsheet file; ability to search on more than one chemical; "local view" to allow visualization only of specific areas; and bar charts for chemical distribution).

Conclusions: Focus groups provided useful information for improving and enhancing TOXMAP and have been a critical tool in assessing the strengths and weaknesses of the resource. Changes made in response include: "start-over" and "Next 10" facilities links, inclusion of a FAQ and search-sensitive FAQ links, rewording of labels and captions, ability to print and save the map, updated and expanded Environmental Protection Agency TRI data (1987–2003), clarification of accuracy of facility location, bar charts showing related percentages for all views, and ability to download data. Two additional focus groups are scheduled for April 2005. Feedback received on future data sets is now guiding key next steps for TOXMAP.

Evidence-based Nursing: An Initiative by Hospital Librarians and Nurses Informs Clinical Practice

Deborah L. Jameson, AHIP, librarian, and **Carolyn Paul**, senior librarian, Treadwell Library; **Elizabeth Johnson**, clinical nurse specialist, Inpatient Oncology/Hematology; and **Catherine Griffith**, clinical nurse specialist, Cardiac Surgery; Massachusetts General Hospital–Boston

Objective: Our poster will describe a grassroots collaborative project of hospital librarians and nurses to bring the concept of evidence-based practice to nurses at the bedside. Evidence-based nursing practice (EBNP) integrates the best research evidence available, nursing expertise, and the preferences of patients and families.

Setting: Large urban teaching hospital with a health sciences library.

Methods: A routine reference interview between a librarian and a clinical nurse specialist sparks the idea for a conference on EBNP. Library and nursing leadership provide support. Another librarian and nurses from areas throughout the hospital form a group to serve as a "think tank" and wrestle with the question of "what is evidence?" A pilot survey of 106 staff nurses confirms a need for more information on evidence-based practice. The resource group creates a program for a day-long conference, in which the participants learn to recognize sources of evidence, identify questions from clinical practice, and leave with tools to do further research. Members of the group act as organizers, presenters, and facilitators. The group designs a self-assessment tool to measure the pre- and post-conference knowledge level of the participants.

Results: The evaluation tool revealed a positive impact of the EBNP educational program on the self-assessed knowledge level of the participating nurses. There were significant changes ($P < 0.005$) in three areas: reflective nursing practice, evidence-based nursing practice, and library research. The EBNP Resource Group presented these results in a poster displayed during the hospital's Nursing Research Day event. The group is planning additional programs that will include information on translating evidence into best patient care as well as more training in accessing resources.

Conclusions: Librarians and nurses working together can measurably raise awareness of the concepts of evidence-based practice. We recommend that an organization encourage the development of a network to support evidence-based nursing practice initiatives and foster the collaboration between librarians and staff nurses.

¿Cómo Sese Llamas? What's in a Library Name and Logo?

Susan Nash Simpson, AHIP, associate director; **Jeff Coghill, AHIP**, collection development librarian; and **Elizabeth Ketterman**, Eastern AHEC librarian/head, Outreach Services; William E. Laupus Health Sciences Library, East Carolina University, Greenville, NC

Objective: Electronic resources have impacted how library resources and services are delivered. East Carolina University's Joyner academic library unit and the William E. Laupus Library, the health sciences library, recently collaborated to create the Virtual Library@ECU enabling the university community to access to a sizeable collection of electronic resources that were jointly purchased and managed. This evolution led librarians at Laupus Library to consider that its unique resources, expertise, and services were not clearly identifiable and distinct from Joyner Library. A "branding" project was initiated by Laupus Library at the same time planning was underway for a new library building that was scheduled for completion in 2006. The new library created a need to begin a fund development effort that would benefit from the branding project.

Methods: The branding project produced a new name, a logo/identity, a brochure, and an initial slogan. These products were intended to dif-

ferentiate Laupus Library, highlight its services and unique resources, distinguish Laupus Library from Joyner Library, and define Laupus Library as a graduate, service-oriented, health sciences library. Laupus Library surveyed clients to determine if the branding effort had the desired result. The brief survey was linked from the library's home page.

Results: Initial test survey results indicated that users recognized the library's logo and were aware of the distinct services and identity of Laupus Library. The library has had significant success in its initial development efforts to enhance the new library scheduled to open next year.

Conclusions: The branding project resulted in some experiences that are worth sharing with others choosing to create and promote a library identity:
• Use existing organizational expertise
• Be mindful and follow institutional communication guidelines
• Solicit input from inside and outside the organization on branding products prior to launch
• Put the brand on everything
• Require that staff use the brand name, logo, and branded products at every opportunity
• Make the slogan as visible as possible
• Promote and advertise branded products at every opportunity

28

Spinning a Web of Healthy Websites for Teenagers: A Community Outreach Project

Nancy A. Bianchi, health sciences librarian, and **Shiela M. Phillippe**, health sciences librarian, Dana Medical Library, University of Vermont–Burlington

Objective: This traveling poster was created by the Cooperative Consumer Health Information Project as part of its commitment to reach teenagers in their communities with quality adolescent health information.

Methods: A recent national survey revealed that almost 70% of teens and young adults have searched the Web for health information. Although young people claimed to have found useful health information on the Internet, they generally remained skeptical of its quality. These survey findings helped the Cooperative Consumer Health Information Project identify the teen population as an age group with a critical need for *quality* online health information. With funding from a grant received from the National Network of Libraries of Medicine in early 2003, the project partnered with two public libraries to develop and implement informational and educational programs for the general public, including teens. A consumer health Website was the initial undertaking. Another key component of the grant was the creation of a traveling consumer health high school exhibit. A paper poster, "Teen Health on the Web," featuring the project's consumer health Website and other acclaimed, subject-relevant teen Websites, was created. Plans for the teen health poster include several week-long displays of the poster, its free accompanying bookmarks, and appropriate materials from the school library or health office at area high schools, public libraries, and community organizations.

Results: In September 2004, the "Teen Health on the Web" poster made its debut at the Fletcher Free Library, Vermont's largest and busiest public library. A month later the poster was displayed at the South Burlington (VT) Community Library, which also serves as the school library for South Burlington High School. Lingering stops and disappearing bookmarks were anecdotal observations reported by librarians at both sites. After a preliminary marketing strategy aimed at area high school principals, plans are now underway to introduce the traveling teen health poster to librarians, nurses, and health educators in high schools throughout Chittenden County.

Conclusions: The positive reception of this traveling display and its accompanying materials demonstrates a significant interest among

Vermont teenagers to obtain useful health information from quality Websites on the Internet.

30

Journals, Journals Everywhere and Not a Shelf to Spare

Mary E. Piorun, AHIP, associate director, Library Systems; **Barbara Ingrassia, AHIP**, associate director; and **Jane Fama**, associate director, Access Services; Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: Identify storage and shelving options for the growing print journal collection. Options could include additional shelving in the library, offsite storage, and improvements to the current library remote storage location. Cost, space, and potential impact on patrons and library staff should all be identified. One option will be chosen, and an implementation plan developed and executed.

Methods: A project team worked to identify the extent of the shelving crisis. Inventorying, estimating, and extrapolating were the primary tools used to determine that the library would run out of space in the main journal collection in early 2004. An offsite storage facility was identified for library use and all costs associated with transforming the space into a viable storage solution were identified. The team also evaluated the current shelving layout in the library and developed a plan to add additional shelving in stages. Finally, the costs associated with improving and maximizing the library's current remote storage location were calculated. This included improved safety, cleaning, painting, and compact shelving. The costs and service ramifications of each solution were compared, along with logistics of moving and merging a portion of the collection.

Results: After careful evaluation, library management determined that improving the current remote storage was cost effective and provided the best option for access and service. Working from our data, we calculated the number of volumes that the storage facility would hold. The project was divided into three phases. The first phase included physically preparing the storage space, installing a third of the compact shelving, writing, and testing move/merge procedures, as well as hiring temporary employees to complete the actual merge. Phases two and three called for additional compact shelving to be installed.

Conclusion: Moving and merging of a collection requires careful planning, detailed data analysis, and hard physical work. Ideally, you will only do this once. In our case, we knew this option would only be a temporary solution to our space crisis that will take us through the year 2012, at which time we hope to have a new library building with compact shelving throughout.

32

Collaboration Between Library Professionals: Starting a New Medical School Campus at a Community Hospital in a Distant Location

Brenda L. Seago, AHIP, director, Computer Based Instruction Lab, School of Medicine, Virginia Commonwealth University–Richmond; **Lois Culler**, director, Jacob Zylman Library, Inova Fairfax Hospital, Falls Church, VA; and **Jean Shipman, AHIP**, director, Tompkins-McCaw Library, Virginia Commonwealth University–Richmond

Objective: The objective of the project is to provide coordination for the library/learning resources needed by medical students when opening a new campus of Virginia Commonwealth University School of Medicine for third- and fourth-year medical students at Inova Fairfax Hospital in Falls Church, VA.

Methods: Through videoconference sessions with the hospital library at the distant site, discussions have taken place about student library/learning resource needs during the third and fourth years of medical

school. What unique resources are already present at each site, and what will need to be in place when the first group of students arrive? How will licensed software used at the main campus be made available or purchased for the students to use at the remote location? Will student's still have to complete the medical informatics assignment during the medicine clerkship rotation at the distant site? Who will teach the classes and correct the papers? Will there be enough study space at the hospital library and what about the number of hours the hospital library will be open? How will computer exams be administered at the distant site? Collaboration and planning between library professionals is ongoing.

Results: Textbooks are being ordered and staff recruited to provide extra hours at the hospital library. The psychiatry clerkship exam has been changed from a computer exam to a shelf exam, so that students at Inova Fairfax will be tested under similar conditions. Library professionals at the hospital will teach informatics sessions to medicine clerkship students and correct their assignments.

Conclusions: The first twenty-four third-year students start at Inova Fairfax Hospital in fall 2005, so we will see the results of the planning efforts then and adjustments can be made as students evaluate their experience at that site.

34

Streamlining Mid-Atlantic Chapter Meeting Registraion Using Acteva

Karen Crowell, AHIP, clinical information specialist, and **Barbara Lynn Eades, AHIP**, Web development librarian, Health Sciences Library, University of North Carolina–Chapel Hill; **Stephanie Holmgren**, librarian, Biomedical Sciences, National Institute of Environmental Health Sciences, Research Triangle Park, NC; and **Beverly Murphy, AHIP**, assistant director, Marketing and Publications, Medical Center Library, Duke University, Durham, NC

Objective: Our chapter is pilot-testing Acteva, an online registration service in order to streamline the registration, reduce expenses for the annual meeting, and significantly improve the ability of the Local Arrangements Committee (LAC) to make program decisions.

Methods: After receiving approval from our Executive Board and members of the LAC, we worked directly with Acteva's customer support team to create an online registration form, using a template that could be customized and stored on Acteva's secure server. Acteva's fees are based on a flat fee and a predefined percentage of each transaction depending on the "ticket price." Acteva charges an additional fee, also based on a percentage of the transaction, for credit card payments, that varies on the type of card used. Our chapter also agreed to pay a set-up fee for Acteva to process check payments, an option many members still prefer. Acteva deducted their fees as each registration payment was processed and forwarded a check for the balance to the chapter every two weeks. The Registration Committee chair, the chapter treasurer, and chapter chair were each give passwords that enabled them to access spreadsheets on Acteva's secure server documenting all transactions to date. Reports were then forwarded to other members of LAC and the Program Committee as needed.

Results: The benefits of using Acteva's online registration service have far outweighed the costs in terms of financial savings, reduced staff labor, and smoother program planning. Since registration could be handled online, preliminary programs no longer needed to be mailed to members, resulting in a huge savings in printing and postage. All information about the meeting was posted on the chapter Website and updated as needed. Evaluations from meeting attendees reflected a high level of satisfaction with the online registration process.

Conclusions: Our chapter welcomes the opportunity to share our experience with other chapters who might be considering using this service. MLA's meetings are much larger, costlier, and more complicated to ar-

range. The potential savings in time, effort, and expense could be even greater for them.

36

Migrating Curriculum Support from E-reserves to Blackboard: A Holistic Approach

Marianne Burke, AHIP, director; **Tina Kussey**, technical services librarian; and **Donna O'Malley**, systems and education librarian; Dana Medical Library, University of Vermont–Burlington

Objective: How can traditional library reserves be transformed to support an integrated curriculum delivered to students exclusively through a course management system (CMS)? This poster will focus on the collaboration developed with a medical education department, the educational technology (ET) department, course faculty, and librarians and staff of the medical library.

Methods: As a new integrated and Blackboard-facilitated curriculum unfolded at the college of medicine (COM), the practical matter of obtaining course materials was not fleshed out. In the old model, the different players, the medical education office, ET, and the library accomplished this without integrating their work. The ET group saw journal articles, digitized slides, old exams, and other files as content for the CMS. The library viewed these as reserves or e-reserves. The office of medical education worked with faculty to assemble course packs or to put photocopies on library reserve. In the new model, integration and reinterpretation of the library role would be essential for continued library participation. The library director convened meetings with the COM education office, ET, course faculty, and key library staff to agree upon roles and develop workflow and communications mechanisms. Education for new roles took place among library staff

Results: New workflow was developed crossing library and COM department lines. The medical education office requested forty-seven articles and two text segments for fall courses. No permissions were required for site-licensed articles linked to the publisher site. Deep links were provided for nearly all requests since portable document format (PDF) files required permissions and the payment of fees. The COM/Library Committee needs formal recognition, as there remains the potential for the procedure to unravel.

Conclusions: E-reserves was the library's answer to the medical school curriculum's need for access to electronic documents. The curriculum still needs this library support, but a separate e-reserves module is no longer the answer. Seamlessly integrating the curriculum functions of the library and medical education into the CMS requires that both units leave the safety of established procedures for the new approach. Now, with course management software and centralized curriculum management, the library can leverage its electronic licenses and expertise into each course offering.

38

Collaborative Campus-Community Model to Provide Quality Health Information to Arabic-speaking Providers and Consumers

Deborah H. Charbonneau, coordinator, Information Access and Delivery, and principal investigator; **Ellen B. Marks**, director; and **Annette M. Healy**, information specialist; Vera P. Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: An academic medical library joined with local health departments and community-based organizations to collaboratively organize and facilitate improved access to an online collection of Arabic-language health information.

Setting: The Urban Health Partners program provides culturally relevant information resources and services, customized on-site training, and document services to public health providers serving primarily

minority and ethnic communities in southeastern Michigan. This diverse geographic area includes the nation's highest concentration of Arab Americans.

Methods: Strategic partnerships were formed with local health departments and community-based organizations responsible for providing health-related services to Arab American communities in the area. Information needs of health providers were assessed through interviews, surveys, and participation in local and international public health conferences. Our collaborative campus-community model identified the need for organized and readily available quality Arabic-language health materials. Our collaboration led to the development of an interface to increase access to an easy-to-use online collection of patient-friendly, Arabic-language health information. This online collection aims to (1) enhance patient-provider communication, (2) improve health literacy, (3) aid in decreasing health disparities in this population, and (4) serve as a national clearinghouse.

Results: This poster describes an effective community-building model for population-based health information outreach. This collaboration produced an easy-to-use Web interface providing access to over eighty Arabic-language health materials covering a wide range of health topics.

Conclusion: The Urban Health Partners program has been successful in facilitating improved access to an online collection of organized Arabic-language materials that are culturally relevant and meaningful to the target audience. The library, in collaboration with its partners, will continue to explore options for enhancing the online collection.

40

A Systematic Review of Tools to Develop a Learning Objects Repository

Jayson Felty, programmer analyst; **Sallieann Swanner**, associate library director, Systems; **Brian Bell**, computer services librarian; and **Mary Moore, AHIP**, director, Libraries; Briscoe Library, University of Texas Health Science Center–San Antonio

Objective: To compare the features of digital asset management software applications and investigate how they can be used to create a learning objects repository .

Methods: An initial faculty focus group was conducted to determine its level of interest in a learning objects repository on campus. After establishing specific user needs and requirements for a learning objects repository through faculty surveys and a literature review, we will research software packages that fall into the open-source and enterprise-level categories. Where possible, demonstrations will be arranged or the software will be installed locally in order that users and library staff can effectively evaluate them for use in creating a learning objects repository.

Results: A spreadsheet comparing existing systems has been completed and a requirements document for our campus has been written. A cross-functional team has been meeting and studying several systems and has piloted three systems.

Conclusions: Because there are several software choices and not one that includes all desired features, the learning objects repository team has concluded that they will select the best software available for the types of learning objects and emphasize standardized schemes for exporting the objects and metadata. This approach should allow the library to move objects and metadata to future systems as the field develops.

42

Application and Usage of Wireless Personal Digital Assistants (PDAs) in a First-year Medical Curriculum

Karen Joc, reference librarian; **Tracy Havlin**, reference librarian; and **Carole Thompson**, associate director, Strategic Planning and Digital Initiatives; Distributed eLibrary; and **Wendy Terry**, assistant professor, Medicine, Department of Medical Education; Weill Cornell Medical College in Qatar, Doha, Qatar

Objective: This electronic poster will focus on the integration of wireless personal digital assistants (PDAs) as learning tools into a new first-year medical curriculum. Outcomes of end-user training workshops for both students and faculty will be discussed as well as reporting the results of a PDA usage survey, which was administered to students.

Methods: A new medical program commenced at the Weill Cornell Medical College in Qatar (WCMC-Q) in 2004: In keeping with the deliberately digital environment that underpins this program, it was decided that all medical faculty and first-year medical students be issued with wireless PDAs for quick reference and Web searches at hand. Each wireless PDA was preloaded with a gold standard suite of medical software and key applications. This suite was selected collaboratively, based on reference librarians' recommendations in consultation with medical faculty to ensure that resources would support the learning needs of first year medical students. During orientation week, librarians delivered a hands-on workshop to introduce students to PDA versions of standard medical resources (e.g., Harrison's, Stedman's, etc.). Later in the term, a special PDA workshop was organized by librarians for medical faculty with a visiting physician who spoke about his work on BioMedicalPDA and the importance of handheld devices in medical education. A PDA usage survey was administered to students focusing on their use of the gold standard.

Results: General feedback on the PDAs has been fairly positive, but also tainted by a lack of time to learn a new technology and a stated preference to use computers. The PDA faculty workshop provided an open forum for discussions on how to incorporate PDA use into the curriculum. And the range of results gleaned from students' responses to the first usage survey suggest many would use more applications on their PDAs regularly if they knew how.

Conclusions: It is evident that more structured end-user training is required to truly utilize PDAs as a learning tool. Librarians plan to deliver more group workshops and one-to-one training in addition to collecting and analyzing more usage data from students.

44

Imagenes de Bibliotecaria: Positive Images of Librarians as Assessed by US and Canadian Librarians and Library Science Students

Nancy Utterback, deputy director, and **Jill D. Sherman**, head, Technical Services, Kornhauser Health Sciences Library, University of Louisville, Louisville, KY

Objective: Recruitment of qualified librarians is an important issue in order to ensure a Futuro Magnífico for libraries. One way people are attracted to the profession is through their perception of the job of librarianship and the people who do the job. Positive images of librarians will be defined by librarians themselves and by students studying to become librarians.

Methods: Email discussion lists and emails were used to invite subjects to answer questions on a Web-based survey. The target audience was health sciences and special libraries in the United States and Canada. Library science students in both countries were also surveyed.

Results: Surveys were completed by 155 health sciences librarians and 148 library science students from the United States and Canada. Both groups offered similar advice on how to project a better positive self-image, ranging from being more assertive (even aggressive) to doing more outreach and actively educating others about our jobs. A minority of respondents thought that librarians already had a positive self-image.

Conclusions: Based on our survey results, we have found that library students and administrators hold the library and information science profession in very high esteem. However, many of the respondents feel

that the image of librarians can be improved and offer insights on how this can be achieved. Improving the employer's and the public's perception of a librarian is essential for recruiting new professionals into the library science field.

46

A Statewide Outreach Planning Initiative: A Two-phased Multidisciplinary Approach

Karen W. Dillon, manager, Library Services, Health Sciences Libraries, Carilion Health System, Roanoke, VA, and **Kelly Near**, outreach librarian, Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Objective: This poster will focus on a statewide health information outreach planning project that was organized as a model to conduct a multidisciplinary statewide outreach planning process to further collaboration among stakeholders and improve access to health information.
Methods: The Virginia Council of Health Sciences Librarians (VaCOHSL) received grants from the National Network of Libraries of Medicine (NN/LM) to conduct two multidisciplinary outreach planning sessions to further collaboration among stakeholders and improve access to health information. A core planning group surveyed association members, interviewed health care providers, and prepared background reports on the status of and access to health information resources by health care providers, librarians, and consumers. A facilitator led a team of twenty-two representatives from the NN/LM, the Area Health Education Center (AHEC), three resource libraries, public libraries, hospital libraries, state agencies, and VaCOHSL members was convened in October 2003. The team reviewed data, discussed needs, articulated priorities, and considered a structure that would further collaboration and ensure positive outcomes. The team was reconvened April 2004 to develop action plans to implement recommendations of the October 2003 session.
Results: In phase one, surveys and position papers were used during a day-long conference to develop a consensus for needs and set priorities. The team reconvened in phase two to review progress and consider the impact of the Virginia ACPF/NLM Information Prescription pilot project. Under facilitated guidance, the team developed an action plan for three projects: InfoRx, Resource Directory, and Training. Outcomes included training of public librarians, consumers, and health care providers; conducting programs and exhibits at state and regional conferences; collecting data on available health information resources; and promoting the project through state publications, conferences, email discussion lists, and the VaCOHSL Web page.
Conclusions: A collaborative, multidisciplinary planning effort can be successful where excellent facilitation and commitment from a core group of leaders exists. Ties with health agencies and public libraries were strengthened; consumers were made aware of existing resources such as MedlinePlus; and the project served to revitalize the state health sciences library organization, VaCOHSL.

48

Library Corners at Dixie Regional Medical Center: An Idea to Bring Information Near the Point of Patient Care Using Designated Computer Workstations on the Floor

Pamella Asquith, medical librarian, Education, Intermountain Health Care, Saint George, UT

Objective: To demonstrate how satellite medical libraries (called "library corners") were installed in locations near to patient care (on the floors of patient towers, intensive care unit, specialty recovery, intravenous therapy, labor and delivery, and joint replacement rehab unit) in a mid-sized, nonprofit hospital in southern Utah as part of an ongoing

training program for nurses in utilizing online resources made available through the medical library and parent corporation (Intermountain Health Care).
Methods: Certain computer workstations have been designated as primary access points for online information resources (UpToDate, MDConsult, EBSCO fulltext collections, CINAHL, PubMed, etc.). The medical librarian has made attractive signs and posters and provided print copies of training materials and resource lists for browsing. Floor or unit managers have encouraged staff to use the library corners, and the librarian has offered in-service training sessions. In October 2004, the hospital received a grant from the NN/LM MidContinental Region "Demonstrating the Value of Hospital Libraries" to systematically train newly graduated nurse interns how to access online resources made available by the medical library. The first batch will come through in June 2005. Nurse interns will be given a pretraining assessment to determine both affective issues and informational competence. After training, a posttest on both affective and informational aspects will be given and statistical analysis will be performed. Results will be presented.
Results: Use of library resources has increased. Staff are more aware of what is on offer and feel more comfortable using it.
Conclusions: Library corners are an inexpensive, non-labor-intensive outreach idea that can increase online database use.

50

Using a Triage Model to Manage Email Reference

Peggy Tahir, manager, Public Services; **Leslie Kleinberg**, Web and print publications coordinator; and **Julia Kochi**, director, Digital Library and Collections; Kalmanovitz Library and Center for Knowledge Management, University of California–San Francisco

Objective: This poster will discuss the library's approach to handling email reference questions.
Methods: Because of the wide distribution of our user group, email reference requests play an increasingly important role in our library's reference services. Users submit questions through several different forms on the library's Website. Since a redesign in 2003, the library's Website has encouraged users to "Contact Us" via links on every Web page. It also integrated two previously separate contact streams. Email reference questions have increased significantly. The poster will outline the process we use to handle questions coming into the library, and how questions are triaged to appropriate library staff. It will discuss issues such as turn-around time, procedures, workflow, and developing supporting documentation for the triage team. Typical questions submitted will be highlighted. Some statistical data will be presented. The poster will discuss the challenges faced when managing a busy email reference service, including the limitations of email, staffing issues, manual tracking, and data collection.
Results/Outcome: The library is able to provide a valuable service to our remote users in a timely manner. However, because of the increasing use of email to contact the library, additional tools are needed to help streamline processes, track questions and answers, and provide statistics. The email triage functions are currently being reorganized under Public Services and Education, and we are investigating using "Wiki" as a possible platform for storing canned responses to frequently asked questions. We will also be looking at long-term solutions that would automate some of the steps in the triage process, as well as provide statistics and build a knowledgebase of answers to frequently asked questions.
Evaluation Method/Conclusion: Triage staff and other library constituents will review and recommend additional software for managing the library's email reference services.

52

Same Space, New Uses: Transforming the Library for the 21st Century

Carol Jenkins, AHIP, FMLA, director, and **Steven Squires**, project manager, Health Sciences Library, University of North Carolina–Chapel Hill; **Jim Curtis**, director, Savitt Medical Library, University of Nevada–Reno; and **Bob Ladd**, curriculum specialist, Health Sciences Library, University of North Carolina–Chapel Hill

Objective: This poster will report on the transformation of a 30-year-old outdated library building through a $13 million renovation, to enable new services and uses that reflect the role of the library in the electronic era.

Method: The library renovation project assumed that collection space could be reduced, that state of the art technology infrastructure would be essential to enable access to information in varied formats anywhere and anytime, that a welcoming environment and services supporting both new and traditional library uses would continue to attract users to the building, and that flexibility in design would be needed to accommodate evolving uses. These premises played out over a two-year renovation project, during which time the library remained open to staff and users. Key features of the new library and data describing resources and infrastructure will be presented. Preliminary comparisons of user satisfaction and use data collected before, during, and after the renovation also will be presented.

Results: The renovation was successfully completed in November 2004.

Conclusion: The renovation showed that these assumptions could lead to a transformed library without changing either size or location and could position the library to assume an enhanced and vital role in the academic health center.

54

Tenure and Faculty Status in Academic Health Sciences Libraries

Priscilla L. Stephenson, AHIP, coordinator, Reference Services, and **Lin Wu**, reference services librarian, Health Sciences Library, University of Tennessee Health Science Center–Memphis, and **Betsy Park**, head, Reference Department, and **Perveen Rustomfram**, reference librarian, Ned R. McWherter Library, University of Memphis Libraries–Memphis

Objective: The purpose of this research is to examine the status of library faculty in academic health sciences libraries and the current appointment, tenure, and promotion policies for academic health sciences librarians.

Methods: The survey population includes all academic health sciences libraries in the United States and Canada. We used the directory listings of the Association of Academic Health Sciences Libraries, the American Association of Colleges of Osteopathic Medicine, *Barrons' Directory of Colleges and Universities*, and HardinMD: Medical/Health Sciences Libraries on the Web. The survey was mailed to 181 directors of academic health sciences libraries in the United States and Canada. The survey yielded 129 usable responses, with a response rate of 71%.

Brief Description: This research project examines the status of library faculty and current practices regarding appointment, tenure, and promotion of academic health sciences librarians in the United States and Canada. Previous studies of four-year college libraries and comprehensive university libraries conducted in the 1980s and early 1990s did not include health sciences libraries. We hypothesize that the professional school focus of academic health sciences libraries will be reflected in differences in faculty status and tenure for these librarians.

Results: Library directors from seventy-four (57%) responding libraries stated that professional health sciences librarians at their institutions have faculty status, while only thirty-nine (30%) stated their librarians

are eligible for tenure-track status. Health science librarians hold faculty rank at fifty-nine (45%) institutions and are eligible for promotion through the academic ranks at sixty-three (48%).

Conclusions: Results of this study are similar to those of previous studies of comprehensive university libraries, in that job performance is more frequently evaluated than teaching, research, or service when health sciences librarians are evaluated for tenure and promotion. Sixty-three (51.9%) of the health sciences libraries require librarians to publish to receive tenure and/or promotion, and publication is encouraged for tenure and/or promotion at eighty-seven (67.5%) of the health sciences libraries.

56

Beyond the Hype: A Long-term Analysis of Website Customization Usage

Michelle Frisque, head, and **Steve Hunt**, Web programmer, Information Systems; **Linda Walton**, associate director; **Jim Shedlock, AHIP**, director; **Stephanie Kerns**, head, Education and Outreach; **Linda O'Dwyer**, education librarian; and **Mark Berendsen**, education librarian; Galter Health Sciences Library, Northwestern University, Chicago, IL

Objective: In the fall of 2003, the library unveiled a new Website that allowed our users to customize their library interface. The purpose of this poster is twofold: to investigate the library's outreach program to determine its influence on the use of the customization tools and to determine if there is a sustained usage of these tools.

Methods: The library's Website, is made up of four tools that our patrons can use to customize their library Web experience. The tools are File Cabinet, My E-Resources, Quick Search, and Stay Current. They were created to help our users manage their information needs. At last year's MLA annual meeting, we presented preliminary research that covered a six-month period that measured the use of each of the customization tools by discipline and patron type. We will continue to use quantitative and qualitative data, this time collected over a twelve-month period. It will show if the library's outreach programs including classes, departmental meetings, orientation sessions, etc., influences the use of the customization tools. It will also show if patrons continue to use these tools after the initial point of contact and incorporate them into their ongoing daily information needs.

Results: Interest in the customization tools the library created continues to grow. As of February 2005, approximately 20% of our registered users have customized at least one of the tools, and use of each of the customization tools has doubled over the last 9 months. Preliminary results show that approximately 35% of our users who customized their library interface continue to make changes to their personalized profiles over an extended period of time.

Conclusions: By evaluating the data gathered over an extended period of time, we are learning whether the tools we created to assist our users are being incorporated into their daily activities and helping them tame the information beast.

58

Library Resources for a Distributed Undergraduate Medical Program

Kristina McDavid, MD undergraduate resources librarian, Woodward Biomedical Library, University of British Columbia–Vancouver, Canada

Objective: To develop collections across university and hospital sites in support of students in a medical school's new distributed program.
Methods:
Setting: The University of British Columbia (UBC) Faculty of Medicine has launched an innovative distributed medical education program

in partnership with the provincial government, provincial regional health authorities and two partner universities: the University of Victoria and the University of Northern British Columbia. As of January 2005, undergraduate medical students are onsite at all three universities. Six hospital libraries are also participating in the initial phases of the expanded program.

Project Description: After a review of existing library reserve lists, a medical undergraduate resources librarian was hired at UBC. This librarian meets with every faculty member who is responsible for a week in the curriculum. Collection principles were developed and students were consulted via focus groups. Reserve lists are communicated to partner sites to ensure access to all materials required by the curriculum. Easy access to UBC's electronic collections at each partner library is a challenge. Solutions include electronic course reserve Web pages maintained centrally at UBC, which in turn provide links to print holdings at each site. Team members at all sites contribute to the development of collection and reserve policies. Effective communication strategies are also key; email lists and collections/reserve Website are currently in place.

Results: This first trial of the distributed curriculum has gone smoothly in most respects. Reserve collections are now in place at all sites, and work on core collections at the distributed sites is ongoing. UBC electronic resources are available to medical students at all sites, and additional access for librarians and staff was purchased.

Conclusions: The distribution of such a multifarious curriculum is complex. Success depends on effective communication between many groups: teaching faculty, clinicians, administrators, information technology/audiovisual staff, support staff, and the library. The second year of the curriculum will pose similar challenges to those already experienced, but we look forward to a whole new set of challenges for the third year, when this cohort of students begins to take part in clinical clerkships at various hospital sites.

60

LibQual+ 2004: From Numbers and Graphs to Practical Application

Michelle M. Foss, assistant director, Access Services; **Lenny Rhine**, assistant director, Collection Management; **Amy Buhler, AHIP**, team leader, Reference Department; and **Beth Layton, AHIP**, deputy director; Health Science Center Libraries, University of Florida–Gainesville

Objective: A task force was created to review data from the LibQUAL+ survey. This review compared results from the 2002 and 2004 LibQual+ surveys, as well as the data from the Association of Academic Health Sciences Library cohort. From this analysis, the task force submitted an action plan to the management group.

Methods: A task force representing various departments and diverse staff was convened to analyze LibQUAL+ data and report recommendations to the management group. The task force reviewed the three key components of the LibQUAL+ survey, "Affect of Service," "Information Control," and "Library as Place." In addition to the data, the task force reviewed user comments to justify the necessary changes to improve the quality of the library to meet patron needs and expectations. The report included recommendations for changes and provided suggestions for further assessment. Although the recommendations and suggestions fall along departmental lines, the management team reviewed the report to plan systematic improvements with the goal of increased patron satisfaction.

Results: The November 2004 report emphasized the difference between the "minimum mean" (as perceived by the users) and the "adequacy mean." Areas that obtained negative scores were "Affect of Service," undergraduate, and "Information Control," overall negative scores and especially from the faculty but not the graduate students.

Conclusions: We are integrating several of the recommendations into departmental procedures and activities. The analysis and recommendations are being incorporated into the current strategic planning process.

62

A Diverse Information Delivery Method: AvantGo Made Easy for Librarians

Nandita Mani, information services librarian, and **Wendy G. Wu**, information services librarian, Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: To provide a quick and easy guide to utilizing the AvantGo mobile Internet service for the purpose of delivering customized information services. This guide has been specifically created to enable librarians to support their patrons by delivering information updates using current technology.

Methods: Providing up to date information to patrons via personal digital assistants (PDAs) is becoming more common, and places an increased demand on librarians to fulfill this role. For this reason, librarians need a quick jumpstart guide on creating an AvantGo channel for the PDA. The hardware and software platforms that will be utilized for our examination of this information delivery mechanism are the Windows XP operating system and AvantGo version 3.3 mobile Internet service. Our investigation will address common questions regarding hardware and software requirements, guidelines and "tips and tricks" for creating and testing an AvantGo channel, and will highlight the standards that librarians should follow when creating an AvantGo channel for the purpose of disseminating information.

64

Have Recipients of MLA Scholarships become Medical Librarians? A Census of Scholarship Winners

Michel C. Atlas, AHIP, reference librarian, Kornhauser Health Sciences Library, University of Louisville, Louisville, KY

Objective: To determine whether the MLA scholarship program is successful; whether the winners of scholarships awarded by MLA pursue careers as medical librarians. The success of the scholarship program will be defined as having a significant portion of the names of past recipients appear on the membership rolls of major library associations.

Methods: A total of seventy-two winners of the MLA Scholarship (45 from 1965 to 2004) and the MLA Scholarship for Minority Students (27 from 1973 to 2004) are listed on the MLA Website. Membership rolls of professional library organizations (MLA, SLA, and ALA) were examined in summer 2004 to determine if scholarship winners are current members. Attempts were made to contact library schools from which the winners graduated for current information. Attempts were also made to do an Internet search using Google of winners to see if they appear as staff on library Websites. MLA was found to not do any follow up on the winners of its scholarship awards.

Results: Thirty winners were identified as being members of one of the professional organizations. This census is limited by the inability to locate all scholarship winners. Some of them may not be known by the names under which they received their scholarships. Some who are active librarians may choose not to belong to a professional association. Attempts to contact by email those found on the Web were unsuccessful. Some may have retired; others may have died. Attempts to secure information about graduates from their library schools were also unsuccessful either, because emails were not answered or the library school had closed.

Conclusions: The hypothesis that winners of scholarships awarded by MLA do pursue careers as medical librarians was proved correct. Therefore, MLA's scholarship program is proved successful and should be continued and vigorously supported.

66

Motivational Interviewing or... I'd Really Like to...but

Dennis A. Pernotto, head, Integrated Advanced Information Management Systems/Program Evaluation; **Michael M. Watson**, associate director; and **Mararia K. Adams**, assistant director, Systems; Library; and **Joan B. Landry**, instructor, Research, and **Arthur T. Fort III**, professor and chair, Department of Family Medicine and Comprehensive Care; Louisiana State University Health Sciences Center–Shreveport; and **Norann Planchock**, professor, chair, and dean, College of Nursing, Northwestern State University, Shreveport, LA

Objective: Expanding its leadership role, the library researched, organized, and directed an intensive effort of multidisciplinary personnel from an academic medical center, school of nursing, school of allied health, community and faith-based agencies, and local, state, and national associations to target the reduction of culturally and family based diabetes in one of the most medically disadvantaged areas of the country.

Methods: Three groups of thirty patients and their families are included in the study. Subjects at a community clinic and a faith-based population serve as treatment groups. The control is a medical center clinic population. Using motivational interviewing (MI) techniques, specially developed low literacy materials, "one-stop shopping" local medical treatment, computerized patient record keeping (CPR), and electronic health information (EHI), this project explores a new paradigm designed to enhance patient/medical staff cooperation and to increase patient compliance. Baseline testing established individualized performance markers. After personalized counseling and education, correlations were examined between patient responses to attitude questionnaires and scores on monthly exercise, nutrition, and medical check-ups (including standard measurements such as HbA1c and a six-minute walk). Aggregate scores for each group allow comparison of group performance. This may reveal trends toward an optimal treatment setting.

Results: By concentrating on patients in the "context of a family," this project used a subject's motivation for participation as an indicator and predictor of personal involvement and commitment to change. Traditional medicine established set markers that the patient is required to meet. Communication during patient visits is minimized when health care workers ask close-ended questions such as "Did you take your medicine?" Little is gained about the reason behind compliance/non-compliance. This study, using open-ended questions (e.g., "What were things like before..."), had subject's define personal goals. Questionnaires revealed a patient's attitude toward health care workers and checkups. Instead of telling patients what to do, this study solicited patients' ideas about actively participating in treatment and achieving personal and medical success.

Conclusions: Initial results from this study indicate that MI, a person-centered method of communication, may be used to enhance a patient's intrinsic motivation by exploring and resolving ambivalence toward a particular change.

68

Medical Informatics Grand Rounds: A Pilot Project

Theodora A. Bakker, NLM associate fellow; **Kate Finkelstein**, assistant director, Education Services; and **Jane L. Blumenthal, AHIP**, assistant dean, Knowledge Management, and library director; Dahlgren Memorial Library, Georgetown University, Washington, DC

Objective: This poster will report on the use of a grand rounds series to facilitate library instruction in medical informatics. Securing continuing medical education (CME) accreditation and evaluation methods will also be discussed.

Methods: In the Medical School Objectives Project report, the American Association of Medical Colleges (AAMC) identified specific objec-

tives for medical informatics for students, clinicians, and researchers. Based on the library's mission, we recognized our role in teaching those objectives. In order to augment the value of library classes to our faculty, we sought CME credits for a particular class. After a discussion with the Office of Continuing Professional Education, we learned that offering a medical informatics grand rounds series would provide more cost-benefit than seeking individual credit for each course. Once approved for a grand rounds series, we began a monthly, year-long series on current issues in medical informatics. Individual activity evaluations and a qualitative series assessment will be used to improve future series. Issues to be addressed include: steps to accreditation approval, scope definition of series content, instructor solicitation, assessment tools, and future plans.

Results: This ongoing project has helped the library increase instruction in medical informatics. American Medical Association (AMA) CME credit provides an additional benefit to participants.

Conclusions: Through the use of the AMA grand rounds evaluation and a quantitative series assessment, we will be able to refine and improve the content and delivery of the series material to meet the needs of our faculty and students.

70

Enhancing Librarian-Faculty Partnerships and Building Library Community through the Development of a Multicultural Reading Collection

Gerri R. Wanserski, health sciences librarian, Ebling Library, and **Betty A. Chewning**, director, Sonderegger Research Center, and associate professor, Social and Administrative Pharmacy Division, and **Joann Pritchett**, assistant to the dean and minority affairs director, Student Services, School of Pharmacy; University of Wisconsin–Madison

Objective: To develop a collection of multicultural reading materials that would provide personal and curriculum support to faculty in their efforts to promote cultural awareness and competency in professional students. To solicit participation from students and faculty by encouraging them to recommend books that would give others insight into their culture.

Setting/Participants/Resources: An urban academic health sciences library in an institution with a small total minority student population but graduate students from diverse cultures. First-year pharmacy students research health beliefs and practices of a minority cultural group, then recommend ways in which pharmacists and pharmacy sites can provide culturally competent care likely to result in improved therapeutic outcomes. A $750 grant was received to purchase a mix of contemporary and professional reading materials

Methods: School of Pharmacy faculty and students were encouraged to recommend books that would help others understand their culture. Culture was broadly defined to include ethnicity, religion, race, disability, or any other minority culture in the United States. Other titles were purchased based on recommendations from the course instructor, the minority affairs director, librarians, reading lists posted on Websites of cultural groups, and book reviews.

72

The Library as Place: Defining Library Space Needs for a New Campus

Gail Persily, director, Education and Public Services; **Julie Piacentine**, Genentech Hall Library supervisor; and **Janice L. Contini**, special assistant; Kalmanovitz Library and Center for Knowledge Management, University of California–San Francisco

Objective: This poster reports on efforts to determine library space needs for graduate students and postdoctoral fellows at a new campus

site at the University of California-San Francisco (UCSF). We will explore the data and information gathered in this effort and how they were used to make our case for student needs for quiet study space at the new campus.

Methods: The UCSF academic health sciences center is expanding to a new campus four miles from the main campus. A branch library opened in the site's first building spring 2003. Additional library space is planned for another building opening summer 2005. A plan to convert the original branch to a 24/7 study center when the new library opens was halted when faculty asked that the space be reallocated for departmental use. The library set out to determine how much space students needed, what they valued in the first library, and to present a proposal for meeting the needs of graduate students and postdoctoral fellows. We examined the campus population, statistics in the original branch, and surveyed the students and fellows. Based on this information, we developed a proposal for space requirements that was presented to the Academic Senate for consideration and decision.

Results: The new campus will see a 43% increase in its population of students and postdocs by summer 2005, with an additional 76% increase by January 2006. A survey of graduate students received responses from 27% of students. Seventy percent reported that the existing library space was important to them, specifically rating the quiet study space and after hours access as important. Because of its location, the new space will not offer the same kind of quiet, contemplative environment that students value.

Conclusions: The new library space, which is similar in size to the existing branch, will not adequately meet the needs of the growing student population. A recommendation to retain the existing space and operate two library branches with different functions was put forward to the campus.

74

Implementing a Nursing Informatics Project in the Solo Medical Library

Heidi Sue Adams, AHIP, medical librarian, Medical Library, Kalispell Regional Medical Center, Kalispell, MT, and **Purnee Brandvold**, student, Distance Learning, Blackfeet Community Hospital, Browning, MT

Objective: To establish a resource based on the nurses' needs that will directly improve their workflow and subsequently lead to better patient care. Also, to prove that an informatics project can be successfully implemented in a one-person library.

Methods: A nurse working in a small hospital located on a remote Indian reservation enrolled in a distance learning program to obtain a master of nursing informatics degree. The student traveled to another hospital to find project opportunities in order to fulfill the degree requirements. The medical librarian at this hospital became the student's preceptor. Nursing informatics links nursing, professional education, and technology in a way to improve workflow and patient outcomes. Using this premise, the medical librarian created a project outline. The student became the liaison for the nurses. The intention of the project was for the student to create a specialized nursing resource that provided nurses with the means to improve their workflow. Coming from the librarian's viewpoint, the project focused on knowledge-based rather than patient-data systems.

Results: A specialized intranet nurse-specific Web page was created. Responses to the Web page ranged from excitement to trepidation. As usage increased, feedback also increased with suggestions for additional resources. Simultaneously, there were more reports of patient satisfaction. Survey results indicated 87.5% of nursing computer access used the Website within a 2-week time frame; 50% of users accessed the resource 1 to 3 times, and 37.5% of users accessed it 3 to 5 times during that period. Reasons for accessing the Website consisted of

patient care support, patient education, continuing education, nursing policy reviews, and communication.

Conclusions: It was rewarding to see the student obtain an understanding of nursing informatics from a knowledge-based perspective. It was also rewarding to see a project of this magnitude completed within the scope of a one-person library. Details on how to accomplish this will be shared.

76

Teaching Medical Librarianship in a Seminar Format

helen-ann brown, AHIP, visiting professor; **Angeline Beljour**, graduate; **Lisa Ferrara**, graduate; **Kaura Gale**, student; and **Rebecca Levine**, graduate; School of Information and Library Science, Pratt Institute, New York, NY

Purpose: To present a meaningful six-week, twelve-session summer school course in medical librarianship.

Objectives: In a seminar format, where discussion began in the classroom and continued at home with additional thought and supplemental reading, this course sought to introduce all aspects of medical librarianship. Through class discussion, readings, and the completion of a comprehensive portfolio based on a type of medical library of each student's choosing and then sharing that expert knowledge, hopefully, the participants gained practical knowledge about the ins and outs of medical library management and administration, public services, technical services, collection development, and marketing/public relations in a collaborative learning experience.

Methods: This is a retrospective analysis of the course evaluation designed by the professor

Result: Seven evaluations designed by the professor revealed the course was enjoyable, especially the site visits and the seminar format. The course offered a strong overview of medical librarianship, with a bit too much emphasis on management. Most students found the instructor's teaching style to be informal and conducive to discussion; however, some students felt some of the sessions should have been traditionally structured. In common, the students felt the preparation of the portfolios strengthened the learning process and gave a good overview of medical librarianship. They felt, however, that the preparation of the portfolios may have been better if regularly reviewed and prepared in pairs or a group.

Conclusions: The overall rating of the course by the students on a scale of 1 to 10 was 8.67 and professor performance was 9.16. The professor totally agreed with the student evaluations and is planning to implement the changes suggested. This was a successful first presentation of the Pratt School of Information and Library Science medical librarianship course in this seminar format.

78

Bilingual Resources for Refugee Health: The Hmong Health Education Network

Margaret Allen, AHIP, coordinator, and **MeLee Thao**, content coordinator, Hmong Health Education Network, Wausau Area Hmong Mutual Association, Wausau, WI

Objective: To develop a community-based health education network serving a refugee population and their health providers.

Methods: Case study of a health education network for a Southeast Asian population, illustrating strategies for identifying, creating, and sharing culturally and linguistically appropriate bilingual health information resources. This Midwestern network serves an international audience.

Results: The Hmong Health Education network began in 2001 with contract support from the National Library of Medicine Office of Special Populations. Successful initiatives include: the bilingual Hmong

Health Website at www.hmonghealth.org with the online Hmong Family Health Guide, an email discussion list for providers, video production, and several Hmong health education events, including health fairs and classes. The Website features a content management system and a bilingual thesaurus for creating keywords as part of the metatag data. **Conclusions:** There is a critical need for culturally and linguistically appropriate health information for refugee populations, as well as education to promote health literacy. Getting health information to the Hmong population requires committed partners, collaboration with Hmong organizations and health providers, and access to technical expertise. Audiovisual resources are most effective, in conjunction with face-to-face education efforts. More funding is required to support content development, translation, multimedia production, and Website development, along with the coordination of educational opportunities needed to validate content for resources produced by the project.

80

A Proud Past, An Exciting Future: Providing Consumer Health Literacy to Native American Tribes of South Dakota

Heidi Nickisch-Duggan, head, Access Services and Systems, and **Danielle P. De Jager-Loftus**, CSA librarian, Lommen Health Sciences Library, School of Medicine, University of South Dakota–Vermillion

Objective: To help improve access to and provide training for the efficient use of electronic health information for South Dakota Native American information professionals and community health coordinators. This project offers South Dakota's Native people the opportunity for them to become informed about health issues that affects the population on a daily basis.
Methods: Over 8% of South Dakota's population is American Indian, with more than 62,000 American Indians living in the state. South Dakota has 9 Native American reservations, all housing federally recognized tribes. Five of the tribal nations operate tribal colleges. The investigating institution will partner with the tribal college libraries in South Dakota and tribal community health coordinators to plan and implement this subcontract funded by the National Network of Libraries of Medicine Greater Midwest Region (NN/LM GMR). It is intended that this project provide the training and resources to enable tribal college library staff and community health coordinators to use a more systematic approach when providing consumer health information resources and services. This project will:
1. Train Native American health care consumers and health professionals to find reliable electronic consumer health information.
2. Provide access to evidence-based full text health information.
3. Develop a health information Website.
4. Provide electronic document delivery services and mediated reference services.

82

Customizing the Patron Web Interface of OCLC's ILLiad

Chris Ewing, Web Support Librarian, Norris Medical Library, University of Southern California–Los Angeles

Objective: To illustrate customization to the patron's Web interface to OCLC's ILLiad, an electronic document delivery system. The information given will assist others in their efforts to enhance ILLiad's Web interface.
Methods: Upon acquisition of OCLC's ILLiad, the medical library undertook a massive redesign of the online patron pages. The out-of-the-box version of the Web pages patrons used for requesting documents was functionally adequate, but graphically unappealing. The goal of the project was to give the interface a new look that was more graphically appealing. The library's Web manager worked with document

delivery staff to determine needs, created new buttons and other visual elements, reprogrammed the linking of the new visual elements to the ILLiad functionality, and worked with a student programmer who made changes to the payment options page. This poster will cover the steps involved in completing a customization project for the Web interface of OCLC's ILLiad.
Results/Conclusion: During the redesign of the ILLiad, patron access Web interface, many obstacles were resolved by breaking each button into a separate Web form element, adjusting database keys through the ILLiad customization manager, developing a script for patrons to follow through each interface scenario, using JavaScript to force account information into the ILLiad database, and reusing or hiding ILLiad page items not correlating to the library's information needs. Since the launch of DocRetriever, the Norris Medical Library's implementation of ILLiad, patrons have adapted to the new system with little or no instructions and few complaints. A future usability survey will be conducted to confirm that the interface is user friendly.

84

A Systematic Approach to Using Evidence to Answer Clinical Questions

Kay E. Wellik, AHIP, director, Staff Library, Mayo Clinic Scottsdale, Scottsdale, AZ; **Dana Martyn**, assistant director, Clinical Care Operations, Banner Estrella Medical Center, Phoenix, AZ; **Carol Hansen**, clinical nurse specialist, Cardiovascular Surgery, Banner Desert Medical Center, Mesa, AZ; and **Vicki Buchda**, director, Nursing, Administration, and **Teri Pipe**, director, Nursing Research, Mayo Clinic Scottsdale, Phoenix, AZ

Objective: Teaching nurses to critically and systematically review evidence to address clinical questions.
Methods: Educational sessions were held in which a bedside nurse was paired with a clinical nurse specialist and the director of libraries to review the literature and collaborate with a nurse researcher to weigh evidence and describe findings in a conference setting. The nurse administrator described how evidence pertains to institutional practice. A critically appraised topic was posted on the nursing Website, and information disseminated via nursing committees.
Results: Outcomes included formulation and dissemination of a clinical "bottom line," high levels of involvement in and satisfaction with the conference, and changes to preceptor class.
Conclusions: Quarterly conferences addressing clinical questions will be held. Continue feedback regarding how evidence-based intervention will occur in our institutional culture.

86

Public Health Information Models

Kara L. Thompson, communications coordinator, and **Ruth Holst, AHIP, FMLA**, associate director, National Network of Libraries of Medicine, Greater Midwest Region, Chicago, IL

Objective: The goal of this poster is to describe five Public Health Information Model projects that were funded as institutional subcontracts within the National Network of Libraries of Medicine (NN/LM), Greater Midwest Region (GMR) in partnership with the Centers for Disease Control and Prevention (CDC). The poster will describe the models, create visual representations of those models, and share the lessons learned by these institutions.
Methods: The purpose of the eighteen-month Public Health Information Model subcontract was to encourage GMR member libraries to work with various organizations, focused on public health, to provide information access for public health agencies in rural and inner city areas. The goal was to have the subcontractors create a model that could be used by other institutions across the country as a framework for creating similar models. We will review reports from the five subcontract-

ing institutions to analyze their work against the original objectives of the subcontract offering to determine how effective these models were in providing information access to public health agencies in the rural or inner city setting. We will use the subcontractors own assessments to measure effectiveness.

Purpose: As part of its five-year contract with the National Library of Medicine (NLM) (May 2001–April 2006) the NN/LM GMR created the "Public Health Information Models Subcontract" in partnership with the CDC. The purpose of the subcontract was to encourage GMR member libraries to partner with organizations that deal with public health issues in their states to create a model to provide information access to public health workers in rural and inner city areas. We approved proposals for five states (Indiana, Iowa, Kentucky, Michigan and Ohio) and have received regular reports on their progress. The five models illustrate the diversity of strategies that can be used to improve access to health information for the public health workforce. Our preliminary assessment indicates that these projects did meet the original intent of the subcontract offering.

88

F2F Connection: A Community Health Information Outreach Project*

Jeffrey T. Huber, professor, School of Library and Information Studies, Texas Woman's University–Houston, and **Beatriz Varman**, information services librarian, Public Affairs, Information Services, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX

Objective: The overarching goal of the F2F Connection project is to facilitate access to relevant electronic health information resources for families who have children with special needs located primarily in the greater Houston area.

Methods: This academic-community partnership project builds on the relative strengths of Texas Woman's University, the Houston Academy of Medicine-Texas Medical Center Library, and Family to Family Network. Family to Family Network is a community-based organization devoted to providing support for families who have children with chronic illnesses and/or disabilities. During the planning phase of the project, a community information needs assessment was conducted. With those results, Internet-connected workstations were purchased and placed in the resource area of the Family to Family Network facility. Once workstations were in place and operational, a health sciences librarian began conducting health literacy programming sessions for interested parents. Session content is based on data gathered during the information needs assessment. In addition, project staff are migrating an existing print educational curriculum developed by Family to Family Network staff to the Web, so that it is more generally accessible.

Results: Three Internet-connected workstations and a networked printer were purchased and installed in the resource area of the Family to Family Network facility. These are available for client use during normal business hours. A health sciences librarian is conducting monthly health literacy programs based on information gathered during the planning phase of the project. In addition, a library science graduate student is staffing the project computers at the Family to Family Network facility two days a week to assist walk-in clients with the basics of locating and retrieving information in an electronic environment.

Conclusions: The F2F Connection project is an example of an academic-community partnership that is designed to capitalize on the relative strengths of each participating institution in order to maximize benefit to community members. This model is one that can be replicated in other settings to promote health literacy programming.

90

Strategies for Improving PubMed Evidence-based Medicine Retrieval

John D. Jones Jr., reference and education librarian, Louis Calder Memorial Library, Leonard M. Miller School of Medicine, University of Miami, Miami, FL

Purpose: This poster examines a variety of ways to improve retrieval of citations when conducting an evidence-based medicine (EBM) MEDLINE search using the National Center for Biotechnology Information's (NCBI's) PubMed interface and the Clinical Queries.

Setting/Participants/Resources: In an urban teaching medical campus, 150 second-year medical students are taught to search PubMed for EBM as part of a 2-year curriculum, which is now fully integrated into the clinical skills course.

Brief Description: Standard best practice searching techniques of using Medical Subject Headings (MeSH) to search the literature in combination with the Clinical Queries may not always yield the best results for an EBM search. Many authors use the controlled vocabulary terms in their structured abstracts. Indexers may or may not pick up on this and may or may not use terms as the authors intended. Search strategies that might be considered atypical should be evaluated and explored for best EBM retrieval. For example, rather than restrict the search term to the MeSH field, consider using the MeSH term as a keyword term. For drug terms, consider the implications of searching MeSH versus Pharmacological Action. Using the controlled vocabulary term as a keyword may help control for the vagaries inherent in indexing. Free floating subheadings rather than attaching them to MeSH terms can improve retrieval. The Clinical Queries are filters and as such strain off citations unrelated to the immediate question.

Results: Search examples on the poster and handout will help searchers evaluate suggested strategies for inclusion or use as part of the searcher's future search approach. The decision to use one or all of the suggested strategies is dependent on the EBM search request variables.

Conclusions: Searching is as much an art as a science. Exploring strategies that might improve literature retrieval is a prerequisite for everyone who works with online searching. EBM is directed and focused on finding very specific information and as such may require searchers to reexamine typical practices in favor of new approaches.

92

Implementing a Pay-for-print System While Maintaining "Good Will"

Marie FitzSimmons, reference librarian, and **M. Sandra Wood, AHIP, FMLA**, librarian, Reference and Database Services, George T. Harrell Library, Penn State College of Medicine, Hershey, PA, and **Frederick Stuppy**, lead systems analyst, Information Technology, Hershey Medical Center, Hershey, PA

Setting: The George T. Harrell Library is an academic health sciences library that serves the Penn State College of Medicine and the Milton S. Hershey Medical Center and supports basic science graduate students and nursing students.

Objective: This poster reports on the transition from free printing to a pay-for-print system.

Methods: The Information Technology Department (IT) worked cooperatively with the library to investigate and implement a pay-for-print system for the library computer stations. Criteria were established to facilitate the choice of system including price and compatibility with established technology and vendor reputability. Because printing had been a free service, it was anticipated that the change might cause a negative reaction from the patrons. To minimize that response, the library launched a public relations program that included notice in the campus newsletter, signs on all computers, posters, and email notification. Students were given an overview during regularly scheduled

classes. During the first week of the transition, IT and library representatives held daily demonstrations and a liberal refund policy was put into effect. The entire process was documented and feedback was solicited, so that other libraries might benefit from lessons learned.

Results: An improved dialogue between the students, library, and IT staff was established. There was a drastic reduction in the amount of uncollected print jobs and a corresponding decrease in the amount of wasted paper recycled. A decrease in costs for printing supplies (paper, cartridges, and service calls) was achieved. A method for capturing use statistics was implemented.

Conclusions: The library was able to successfully transition from unregulated free printing to a controlled pay-for-print system. "Good will" was maintained throughout the project by greatly enhancing communication between the students, the library, and IT staff. Finally, the enhanced printing technology in the library provides a mechanism for improving cost recovery for the future.

94

Finding Future Patrons: Using Geographic Information Systems (GIS) to Identify Prospective Marketing Areas for a Special Library

Rozalynd P. McConnaughy, coordinator, Center for Disability Resources Library, School of Medicine Library, University of South Carolina–Columbia

Objective: To identify counties in the state with low rates of utilization of library resources as a means of identifying locations for future library promotion. The focus of marketing efforts in the past has involved promoting the collection to particular groups by exhibiting at various professional conferences, instead of publicizing library services to specific areas of the state.

Methods: Setting: The Center for Disability Resources Library (CDR Library) is a special library that serves anyone living in South Carolina, primarily professionals who work with individuals with disabilities and family members of children with special needs. The collection has been part of the University of South Carolina School of Medicine Library since 2001. The library is funded by a yearly contract; thus, the utilization of the library is vital to its existence.

Participants: Library patrons

Methods: Circulation statistics from June 1, 2001–February 17, 2005, were compiled to identify county-level usage trends. Circulation statistics include items checked out and renewed. Population data from Census 2000 was used. These usage trends were spatially referenced and displayed visually using ArcView geographic information system (GIS) software. Five maps were created of South Carolina counties: Census 2000, checkout totals, renewal totals, per capita checkout, and per capita renewal.

Results: As expected, urban areas and counties near the physical location of the library have high usage totals. The northeast and southwest regions of South Carolina are regions of lower usage. Marlboro, Dillon, McCormick, Edgefield, Clarendon, Barnwell, and Jasper counties have never borrowed materials from the library. Considering their populations, Spartanburg, Chesterfield, Marion, Orangeburg, Dorchester, Berkeley, and Beaufort counties have low usage of library materials.

Conclusion: Using GIS to identify low usage areas of library materials is an effective means for identifying future marketing areas. The visual representation of the data made identification of regions of low usage easier than using a standalone database with no visual-spatial component.

96

Really Simple Syndication (RSS): The Future of Content Delivery

James D. Prince, AHIP, technology coordinator, National Network of Libraries of Medicine, Southeastern Atlantic Region, Health Sciences and Human Services Library, University of Maryland–Baltimore; **Greg Bodin, AHIP**, technology coordinator, National Network of Libraries of Medicine, South Central Region, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX; and **Bryan S. Vogh**, technology coordinator, National Network of Libraries of Medicine, Greater Midwest Region, University of Illinois–Chicago

Objective: To introduce really simple syndication (RSS) as a viable technology in the field of medical librarianship.

Methods: RSS is a technology that allows dissemination of regularly changing Web content, permitting content providers such as Web page developers, online news publishers, journal publishers, and bloggers to syndicate their content and notify subscribers when new content has been added. RSS allows Web users to stay informed by being notified when new content is available, rather than having to visit the site to see if changes have occurred. This poster will examine this emerging technology as a useful tool for libraries who produce Web-based content and for people who use the Web as a regular source of information.

98

A Look at OT Search and the Indexing of Occupational Therapy Literature

Linda M. Hartman, reference librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: OT Search is a database of occupational therapy literature designed to make it easier for the novice searcher to find information by indexing only occupational therapy (OT)–related materials. The objective is to gain a better understanding of where the OT literature is indexed and the usefulness of OT Search compared to other databases.

Methods: Determine what other databases index the journals covered in OT Search. Look at selected articles found in each database to determine if there is an overlap or gaps in coverage. The ability to search occupational therapy doctoral dissertations and popular assessment tools in OT Search will also be considered. User feedback will assist in evaluating the user interfaces of the various databases reviewed. The results of these inquiries and comparisons will help to determine whether this database's subject exclusivity provides a powerful enough tool to warrant subscribing to OT Search in addition to other databases. With a better understanding of this database and others, the information professional can better instruct the user to search for OT information.

Results: OT Search lists which journals it indexes. These journals were searched in the Serials Directory database to see what other databases indexed them. The indexing of many OT journals was compared in several databases including OT Search, MEDLINE, and CINAHL. This helped to determine which databases contained the most comprehensive coverage.

Conclusions: Many of the journals indexed by OT Search are also indexed by MEDLINE and CINAHL. There are, however, some differences in which journals are covered and to what extent. It is, therefore, always a good idea to search more than one database when doing a comprehensive search. OT Search also links the user to a set of predefined searches, doctoral dissertations, and lists of rehabilitation organizations and databases. This additional information makes OT Search an information portal and, therefore, a unique resource for the OT professional.

100

Promoting Faculty Appointment and Advancement for Academic Health Sciences Librarians

Jan H. LaBeause, AHIP, director, Medical Library and Peyton T. Anderson Learning Resources Center; **Linda R. Adkison**, professor,

Department of Basic Sciences; **Dona Harris**, associate dean, Faculty Development; and **Roxanne M. Nelson, AHIP**, assistant director, Public Services, and **Rita B. Smith, AHIP**, outreach and education coordinator, Medical Library and Peyton T. Anderson Learning Resources Center; Mercer University School of Medicine, Macon, GA

Objective: The status of librarians in academic settings is as varied as the institutions at which they serve. While librarians often have faculty appointments, many are unable to advance beyond their initial appointment due to the doctorate requirement for advancement of promotion and tenure committees. Such was the case at our university where librarians had appointments to the medical school faculty but were not able to pursue promotion through the ranks. We sought to create a track for librarians within the current promotion and tenure guidelines.
Methods: In preparation for suggesting another category for library faculty, we compiled a number of supporting documents:
1. results of a mini-survey of Association of Academic Health Sciences Libraries (AAHSL) members,
2. analysis of the Policies and Procedures of the main campus library faculty,
3. documents verifying the master's as a terminal degree for librarians, and
4. statements on the need for academic librarians to have faculty status. We developed a proposal for a library faculty within the medical school faculty, paralleling the standards previously established for the categories of academic, clinical, and community faculties. In lieu of requiring a doctorate and/or post-doctorate training, the proposal incorporated the Academy of Health Information Professionals (AHIP) into a requirement for "post-degree training" for appointment or advancement to library assistant professor and above; and the academy Essential Areas of Knowledge into a requirement for an "established area of expertise in one's field" for appointment or advancement to library associate professor and above.
Results: The new guidelines recognize and reward librarians for their service to the university, their contributions to the mission of the school, and their educational support of students. The document was approved unanimously by all relevant governing medical school and university committees with minimal discussion and went into effect on July 1, 2004. Two of the authors have recently submitted their portfolios requesting promotion under the new criteria.

102

How to Develop a Patient Education Resource Tool through Partnerships and Collaboration.

Carolyn M. Papa, library manager, Library, and **Debra Hall**, patient education coordinator, Education Resources, All Saints Healthcare, Racine, WI

Objective: The objective of this poster is to illustrate how a hospital librarian collaboratively built partnerships throughout a health care organization and became a patient education resource center for health care staff, management, and senior leadership.
Methods: Patient education provides an empowering catalyst for patients to engage in their own health care decision making process. Interaction between provider and patient can enrich the relationship, which can impact health care outcomes. Health care organizations are challenged with the two-fold responsibility of providing effective patient education choices for a diverse patient population while managing constraints on time and budgets. The market has responded to a recognized need for quality patient education resources by providing volumes of information sources available from free to paid services. The health care librarian can serve as a powerful partner as a natural information source for gathering, organizing, and delivering resources to staff for use. Data were gathered from participation on the Patient Education Advisory Group, consultation with the patient education

coordinator, interaction with visitors in the Consumer Health Library, research and analysis, and discussion with key leaders.
Results: The findings resulting from this study:
• A consistent patient education process was needed to facilitate the continuity of care.
• Current patient education resources were identified and recommended for specific patient populations.
• A training curriculum for health care providers in accessing online patient education resources and using patient education materials with a diverse (literacy, culture, language) population was developed.
• A strengths, weaknesses, opportunities, threats (SWOT) analysis identified opportunities for the management and administration of patient education materials.
• Quick and easy access to patient education materials was essential for proper utilization.
Conclusions: The hospital librarian has the opportunity to play an active role in patient education. Positioned as the information professional, the librarian can provide access to patient education resources for health care professionals and library visitors. The librarian can also facilitate access to research in issues of health literacy, cultural diversity, best practices, and potential cost savings. The relationships developed through partnerships and collaboration provide the venue for dispensing and analyzing valuable information for organizational quality.

104

Building Bridges Between Conventional and Complementary Medicine: A Simple and Practical Manual for Developing an Integrative Medicine Program in Your Institution

Kelly Taylor, information coordinator, Health Science Libraries, and **Alice Moore**, reiki master and education coordinator, and **Marcia Rothwell**, director, Integrative Medicine, Hartford Hospital, Hartford, CT

Objective: This poster presentation will showcase a Web-based, full-text "how to" manual on developing a hospital-based integrative medicine program that serves both inpatients and ambulatory outpatients.
Methods: The staff of a hospital-based integrative medicine program and the Hospital's Health Science Libraries staff collaborated on the development, writing, and editing of this "how to" manual. The manual highlights the development process and includes how the library supports and provides services to this innovative program at a major urban hospital.
Results: The Web-based "Building Bridges" manual was completed in winter 2004 and is available at: www.harthosp.org/IntMed/manual/. The manual documents the necessity of having library services and support and includes links to the National Library of Medicine's Gateway Website, PubMed, and other reliable Web-based resources along with the "how to" steps needed to develop a successful hospital-based integrative medicine program. Feedback from the manual's online survey tool provides positive feedback for the relevance of the manual for health care professionals across the United States as well as in other countries.
Conclusions: The collaboration of the itegrative medicine and Health Science Libraries staff in developing a free, easy access "how to" manual that shares the experiences and expertise it takes to develop a hospital-based program has been a successful and gratifying experience.

108

Problem-based Learning: A Bridge to Evidence-based Medicine—Pass, Fail, Honors: An Evolving Model

Elizabeth J. Richardson, associate librarian, Information Services, and **Eric D. Albright, AHIP**, director, Health Sciences Library, Tufts University, Boston, MA

Objective: The objective of the Tufts University School of Medicine (TUSM) second-year evidence-based medicine (EBM) is to enable students to acquire basic evidence-based searching skills. Another goal is to encourage students to explore clinical research skills.

Methods: TUSM has committed to the integration of EBM) throughout the four-year curriculum. The introduction of honors to the basic EBM skills program offered an opportunity for advanced work to students who wanted to challenge their search skills and were interested in pursuing evidence-based research. Third-year clinical rotations offer students an opportunity to practice EBM skills in a mentored clinical setting. In the fourth year, they have the option of choosing an elective where they can apply EBM skills to research questions in the basic sciences and clinical controversies or to the National Institutes of Health (NIH)–funded Complementary Alternative Medicine (CAM) and its integration with allopathic medicine. Honors-level students will be monitored to see if the added benefit of an honors grade has an effect on enrollment in fourth-year electives that include a clinical research component.

110

Interdisciplinary Collaboration Center Development in an Academic Health Sciences Center Library

Margaret E. Moore, director, Planning, and **Wallace McLendon**, deputy director, Health Sciences Library, University of North Carolina–Chapel Hill

Objective: Fostering innovation in scientific discovery, teaching, learning, and professional practice through an interdisciplinary collaboration center in the academic health sciences library. The ultimate goal is discovery of new knowledge and new ways of transmitting knowledge. Establishing a library collaboration center provides another opportunity to demonstrate the library's value as an essential partner in managing knowledge to advance health.

Methods: Creating the center is a collaborative planning process. A team of librarians with staff in similar centers across the country and campus advisors are defining the collaboration center services, spaces, technologies, and policies. Librarians systematically meet with key stakeholders to assess needs and promote the value of the library as host. With advice from these contacts, librarians identify potential users and generate support from stakeholders. Plans for the center include a high-resolution 8x16-foot visual display wall and Access Grid 2.0 for high-quality audio and real-time video for interactive communications between users at multiple sites via high-speed Internet2 networking. Initial and on-going funding will come from a combination of sources: campus, library, grants, and fees for service.

Results: Poster will include pictures of the high-resolution display wall and other collaboration technologies, library team, key partners, and graphical displays of the planning process, and results/outcomes to date. Ribbon cutting for the renovated Health Sciences Library was March 7, 2005. The Center for Clinical Genetics, Center for Exploratory Genetics Analysis, and a group planning disaster management are interested in using the Collaboration Center when it opens later in 2005.

Conclusions: Evaluation will be outcomes-based and tied to the program logic model developed in the initial planning. Desired outcomes include center users' positive perceptions of value, effectiveness, and quality of the library's contributions to the research, education, and service projects. Indicators will include ongoing use and funding success.

112

Not Just for Celebrities: Collaborating with a Public Relations Representative to Market Library Education Services

Kim Bloedel, reference and education librarian, and **Kathryn Skhal**, reference and education librarian, Hardin Library for the Health Sciences, and **Kristi Robinson-Bontrager**, public relations and marketing coordinator, Main Library, University of Iowa–Iowa City

Purpose: This poster will highlight a marketing campaign for a library education service.

Setting: University of Iowa's Hardin Library for the Health Sciences serves the information needs of the Colleges of Medicine, Nursing, Dentistry, Pharmacy, and Public Health. In addition, research support is provided to the University of Iowa Hospitals and Clinics (including related allied-health education programs) and the Department of Speech Pathology and Audiology.

Brief Description: Hardin Library for the Health Sciences offers an education service called Hardin House Calls. In collaboration with the University of Iowa libraries' public relations coordinator, the education team developed a marketing campaign for Hardin House Calls. This poster outlines the marketing strategies used to promote and increase the visibility of Hardin House Calls.

Methods: Marketing strategies include: brainstorming with external relations people from the health sciences campus, distributing a user survey, meeting with faculty members, designing a new logo, and featuring the logo prominently on the library Website. In addition, posters continue to be distributed to departments and are currently displayed in key areas of the library. Future plans include Hardin House Call bookmarks and magnets.

Conclusion/Discussion: The marketing strategies increased the visibility of the Hardin House Call service. The campaign also led to unexpected results, such as a series of faculty development sessions, education collaborations with smaller health sciences departments, and collection development opportunities.

114

Tufts University Sciences Knowledgebase: Is It Living Up to Its Promises?

Eric D. Albright, AHIP, director, Health Sciences Library, Tufts University, Boston, MA

Objective: Assessing how the Tufts University Science Knowledgebase (TUSK) is fulfilling its promises to the students and faculty of Tufts University's Health Sciences Schools

Methods: TUSK, formerly HSDB, is a database-driven multimedia knowledge management system that has been developed over the past eight years in response to the specific needs of Tufts' health sciences schools. Built using open-source tools and open standards, TUSK is a content repository that also handles user and course administration, student self-assessment, and course evaluation. The benefits of open source include ease and low cost of installation with limited local software configuration, customization through selection of preferred modules and functions, and modifiable open source code. Multiple TUSK installations provide the potential for mutual benefits derived from leveraging each site's curricula and intellectual capital and shared application development. Students use TUSK on a daily basis for pre-class preparation, studying, course evaluation, queries on clinical rotations, reviewing material from the preclinical years, and clerkship evaluations. Faculty use TUSK to author and upload content and redesign and integrate courses. Curriculum planners examine themes for enhancement across the curriculum.

116

If You Build an Online Catalog, Will They Come?

Patricia A. Reusing, AHIP, medical librarian, Harry M. Poppick Medical Library, Bayshore Community Hospital, Holmdel, NJ

Objective: To demonstrate increased usage of a medical library collection in a small community hospital by changing from a card catalog system to a Web-based online catalog. This study may show that usage of the library, even a very small one, can increase through the availability of an online catalog.

Methods: Despite publicizing the library through the hospital's newsletter, an open house, and news items in local papers, the number of visitors to the library did not increase significantly. To better share the collection with the target population (employees, physicians, patients and families, members of the community served by the hospital, the local county libraries, and medical librarians in New Jersey) an online Web-based catalog was purchased with grant funding from the National Library of Medicine. The catalog will be viewable from office and home computers. From December 2004 (the date the link is to be placed on the hospital's Internet site) through the first several months of 2005, usage will be measured by the number of books checked out. This will be compared to the estimate of the total number of books checked out before the online catalog was acquired.

Results: The online public access catalog (OPAC) was linked on the hospital's intranet in November 2004 and the hospital's Internet site in mid-January 2005. Before the OPAC, library circulation had been 5 books per month. After advertising the OPAC, circulation increased to 17 per month. The OPAC was advertised in the hospital's newsletter, its intranet, and its *Annual Report,* which is mailed to 90,000 households. Staff was emailed and local library directors were notified. News releases were sent to the local media. Colleagues in the Health Sciences Library Association of New Jersey were invited to use the OPAC for borrowing resources.

Conclusions: The OPAC has boosted circulation. It is essential to advertise the OPAC on the hospital's intranet and Internet, in hospital publications, and by emails to staff. The OPAC has not only increased circulation, but has improved the overall visibility of my library in the hospital and in the community.

118

Beyond Medical School: An Information Literacy Program for First-year Medical Residents

Kristina McShea, clinical librarian, and **Mary McCann**, director, Library Services, and **Robin Garrell**, associate program director, and **Dennis Policastro**, program director, Residency Training, Department of Medicine, Pennsylvania Hospital–Philadelphia

Objective: The American Board of Medical Specialties/Accreditation Council for Graduate Medical Education requires residency programs to show that resident physicians acquire and maintain general competencies in patient care, medical knowledge, practice-based learning and improvement, and systems-based practice. This poster describes an information literacy program for first-year medical residents to prepare them to meet these requirements.

Methods: In collaboration with the residency program director and associate program director, library staff developed an information literacy program for interns in the Department of Medicine. An information literacy assessment was distributed to determine the intern's basic understanding of principles of evidence-based medicine, clinical information resources, and literature searching. Based on the results of this assessment, librarians developed a series of teaching modules. The modules were presented as lectures with live online demonstrations. The lectures covered concepts of evidence-based medicine, basic search skills, and evidence-based medicine resources. Once the modules were presented, interns were asked to complete a posttest. The information literacy assessment and the posttest will be placed in the interns residency folder to demonstrate competency in these areas of information literacy.

Results: Twenty-four interns participated in the information literacy program in 2004. Of the seventeen (68%) who returned the pretest, most were not familiar with concepts of evidence-based medicine or

the correct use of Boolean operators and controlled vocabularies. After the three lectures, five interns (21%) returned the posttest. While the results of the posttest showed improvement in all areas, the return rate was inadequate to determine whether or not these results were typical.

Discussion/Conclusions: Collecting the posttest was the biggest challenge for the information literacy program. The internship year is one of the busiest, and residents must balance their time between clinical and academic requirements. The pretest was completed and collected during a regularly scheduled conference, while the posttest was left in the interns' mailbox to be completed on their own time. Moving forward in 2005, time will be allotted at the end of each lecture to complete a short posttest on the materials covered. A measure of success of this project is that Library Services has been asked to present similar training for the obstetrics/gynecology and surgery residents.

120

Is Our Student Liaison Program Reaching Its Audience?

Jeanne S. Larsen, assistant director, Reference and Research, Dahlgren Memorial Library, Georgetown University Medical Center, Washington, DC

Objective: Will the activities of the student liaison librarian increase the number of the librarian's interactions with students? How does our student liaison program compare to other academic health sciences libraries' programs?

Methods: In academic year 2005, Dahlgren Memorial Library established a new liaison program for the Georgetown University Medical Center and the hospital's faculty, staff, and students. One librarian was designated the student liaison librarian and assumed responsibility for students in the Georgetown Experimental Studies (GEMS) Program, School of Medicine (SOM), and Special Masters Program (SMP) in Physiology. As part of this case study, the librarian will use the liaison database to summarize her student liaison activities and record all student questions. During these encounters, students will be asked who referred them. The results will help us determine if any program changes should be considered. In addition, academic health sciences libraries' Websites will be reviewed to determine the nature of their student liaison programs and to see how our library compares in its Web presence.

Results: Liaison activities included: attending individual class and Executive Student Council meetings, writing a column for the student electronic newsletter, sending emails to the class email lists, developing a Web link for the student Websites, attending student events, and talking with individual students. Student questions and feedback about the library's services and resources were received as a result of each activity. However, emails to the class email lists and attendance at their Student Council or class meetings generated the largest number of contacts and referrals.

Conclusions: A varied communication approach works well for our GEMS, SOM, and SMP students. However, due to the low key roll out, modest objectives, and low number of questions or contacts, it is too soon to determine the most effective and efficient means of communication and the overall success of the program. A review of the other US academic health sciences libraries' Websites for the prominence of its liaison services to students reflected a strong student liaison presence for Dahlgren. One can link to "Liaison Librarians" from our home page, and we have a Web presence on the "Student Website."

122

Simplified Access and Smarter Searching: Enhancing the User Experience While Improving Efficiency in Website Management.

Pamela M. Murnane, information services librarian; **Debra S. Ketchell, AHIP**, associate dean, Knowledge Management; **Dick R.**

Miller, associate director, Resource Management; and **Charles Yates**, digital information systems programmer; Lane Medical Library and Knowledge Management Center; **Philip S. Constantinou**, director, Information Resources and Technology Systems Development; and **Rikke Ogawa, AHIP**, information services librarian, and **Heidi Heilemann, AHIP**, associate director, Research and Instruction, Lane Medical Library and Knowledge Management Center; Stanford University Medical Center, Stanford, CA

Objective: Our principle aims were to reduce barriers to information resources on and off campus, to simplify access to content previously only available through multiple vendor-imposed front doors, and to streamline Website maintenance by providing simple editing interfaces to ensure a more distributed model of staff participation in keeping Website content current.

Setting: Lane Medical Library and Knowledge Management Center serves Stanford University Medical School, two teaching hospitals with affiliated clinics, and multiple off campus clinical teaching sites.

Methods: The Knowledge Management Team released a redesigned library Website integrating several new features that enhance the user experience. These developments include: targeted metasearches, link resolving software, and simplified authentication for a user community with various affiliations, IDs, and offsite work locations. In conjunction with the redesign, library staff adopted content management tools to distribute and streamline Website maintenance. These include Move-able Type, Contribute software, and connections to the library catalog for dynamically generated resource lists. Multiple cross-functional teams orchestrated the release of this collection of tools.

Results: Lane's new Website features have shown success in anecdotal words of praise from users as well as in consistent increase in site usage since release in 2004. Staff have found content tools to be simple and efficient to use. Our site is more current and dynamic than was possible in the previous model with a single content producer. Distributed maintenance and cross-functional teams have increased communication across the library and Information Resources and Technology.

Conclusions: Website features designed for and with users will improve site usability and increase overall use. We have also found that simple content management tools make distributed site maintenance feasible.

124

Reaching Out: Online Training Tools for Underserved Populations

Siobhan Champ-Blackwell, community outreach liaison, Health Sciences Library, National Network of Libraries of Medicine, MidContinental Region, Omaha, NE, and **Whitney Davison-Turley**, technology liaison, Archie Dykes Library, National Network of Libraries of Medicine, MidContinental Region, Kansas City, KS

Objective: In order to increase their access to health information, training will be developed and delivered to members of two distinct organizations who face barriers when accessing computers and the Internet. Training will include basic information about computers and the Internet as well as finding and evaluating online health information. Training will be suitable for classroom or independent use.

Methods: Our outreach project will focus on two distinct populations: Community Technology Centers' (CTC's) member organizations and members of a rural American Indian Tribe. Both groups are setting up computer labs for their communities to provide training in how to use computers and access the Internet. We will add finding and evaluating health information to the skills taught in these labs. In preliminary project planning, it was discovered that some groups faced slow dial-up access to the Internet, so the team has decided to provide training materials on CD-ROM as well as online. A train-the-trainer program will be developed and implemented that will allow community gatekeepers

to provide training to their own members, although materials will also be suitable for self-study. Project evaluation will focus on the impact of the content and the success of online instruction for underserved populations.

Results: The initial online training modules for the CTC communities will be ready by the spring 2005 and will be submitted to a working group composed of CTC administrators to provide feedback. The Web-sites will then be updated and sent to a focus group at two CTC sites for use and evaluation.

Conclusions: The goal is to have the final version of one of the modules available for demonstration at the annual CTCnet conference, June 2005. Follow up will be ongoing with the groups in the Digital Divide Network (DDN) and other working groups and development of a Health Information Community in the DDN.

126

Instruction 24/7: CINAHL (EBSCO)

Pamela J. Sherwill-Navarro, AHIP, College of Nursing librarian, and **Beth Layton, AHIP**, deputy director, Health Science Center Libraries, and **Marcela Pineros**, instructional designer, Center for Instructional Technology and Training, University of Florida–Gainesville

Objective: With the increase in distance education courses in the areas of nursing and allied health, health sciences center (HSC) librarians recognized the need for a sophisticated Web tutorial on the CINAHL database. This tutorial was developed with assistance from instructional designers at the university's Center for Instructional Technology and Training (CITT). This poster will outline the process, explain lessons learned, and showcase the results.

Methods: In fall 2003, CITT issued a request for proposals from faculty to conduct projects that improve teaching and learning outcomes. The library applied for and received this funding. A tutorial on CINAHL (EBSCOHost) was chosen for this project, because it is a key resource to multiple student groups and an online tutorial on this format did not exist. Library faculty collaborated with instructional designers at CITT to create this tutorial. Producing the material required examining what was taught in face-to-face sessions and creating interactive online examples that could be used in this project.

Results: The end product is a multimedia tutorial that is interactive and incorporates examples that represent the information needs of the majority of CINAHL's users. The tutorial consists of multiple parts: preconcepts, navigation, examples, tutorials, and tip sheets. The examples section guides the learner through realistic scenarios while the tutorial presents parallel scenarios that require interactive responses to continue.

Conclusions: The tutorial is complete and has been accessed more than 200 times since it became publicly available on the HSC Libraries' Website in November 2004. Comments received about the product have been positive, praising "realistic" scenarios, a "useful" project, and a "professional" product. Design elements developed and skills acquired during this project will be incorporated into several upcoming tutorial project

128

Learn Basic Library Skills on "Your" Time

Nighat Ispahany, reference librarian, and **Kathren Torraca**, reference librarian, Augustus C. Long Health Sciences Library, Columbia University, New York, NY, and **Elizabeth M. LaRue, AHIP**, assistant director, Library of Rush University, McCormick Educational Technology Center, Rush University, Chicago, IL

Objective: In the summer of 2003, our library migrated to a new Columbia Libraries Information Online (CLIO). The need to educate our clientele on how to efficiently navigate the interface for the newly purchased CLIO became an important concern. In order to train as many

people as possible, seven online tutorials were developed for a self-paced, remote learning experience. In an effort to provide structured searching guidelines, the online lessons demonstrate multiple ways to search CLIO and how to search for electronic books and electronic journals in the E-Resources section of the library's Website.
Methods: Using Power Point, snapshots of the CLIO search screens are captured and brief, clear instructions are provided on how to use CLIO to search by title, author, keyword, author/title, and journal title. A similar procedure is used to demonstrate how to search for electronic journals and electronic books. The content of each tutorial is wrapped in design and navigation elements that keep a consistent look and context across each tutorial. This consistency makes users familiar with the tutorial environment whether they view all tutorials consecutively or jump around between tutorials. For usage evaluation, a Web counter is placed to track how often the tutorials are visited and an email link for feedback is also provided.
Results: The tutorials became available "live" on the health sciences library's home page on June 23, 2004. In both July and August of 2004, the most used tutorial was How to Find Electronic Journals in the E-Resources segment. The second most used tutorial in both July and August of 2004 was How to Search by Journal Title in CLIO.
Conclusions: Usage statistics demonstrated that remote learning needs existed and were met. For the months of July and August we received a total of 1,258 visits for all tutorials. We also learned that advertising the tutorials on our library home page resulted in greater usage. Plans to update and to create other tutorials are under discussion.

130

Partners in Preparedness: National Memorial Institute for the Prevention of Terrorism and University of Oklahoma Health Sciences Center

Brad Robison, director, Library, National Memorial Institute for the Prevention of Terrorism, Oklahoma City, OK; and **Shari Clifton, AHIP**, head, Reference and Instructional Services; **Ursula Ellis, AHIP**, reference librarian; **Susan Sanders, AHIP**, reference librarian; **Clinton Marty Thompson Jr., AHIP**, director; Robert M. Bird Health Sciences Library, University of Oklahoma Health Sciences Center–Oklahoma City

Objective: To demonstrate ways librarians can facilitate access to resources related to terrorism, bioterrorism, and disaster preparedness.
Methods: Librarians from the University of Oklahoma Health Sciences Center (OUHSC) and the National Memorial Institute for the Prevention of Terrorism's (MIPT) Terrorism Information Center describe their strategies for connecting users to relevant, authoritative terrorism information, in all of its forms, as well as disaster preparedness and response. In this poster session, the authors will present a variety of activities they have implemented; and discuss the development and promotion of specialized courses, extensive Web resources, such as www.mipt.org, and the provision of library services, such as reference assistance.
Results: Through partnering, librarians at MIPT and OUHSC have gained greater awareness of each other's resources and services. The relationship has resulted in mutual promotion, joint activities, and increased preparedness of both libraries and their users.
Conclusions: The MIPT-OUHSC partnership demonstrates how libraries of different types, with unique strengths, can work together to foster preparedness through information resources. The physical location of both libraries in the downtown Oklahoma City area engenders a sense of community identity.

132

The Librarian's Role in Disaster Preparedness and Response

Shari Clifton, AHIP, head, Reference and Instructional Services; **Susan Sanders, AHIP**, reference librarian; **Ursula Ellis, AHIP**, reference librarian; and **Clinton Marty Thompson Jr., AHIP**, director; Robert M. Bird Health Sciences Library, University of Oklahoma Health Sciences Center–Oklahoma City; and **Brad Robison**, director, Library, National Memorial Institute for the Prevention of Terrorism, Oklahoma City, OK

Objective: Provide an overview of the content included in a bioterrorism course designed for librarians and information professionals.
Methods: Recognizing that librarians are likely points of first contact for professionals and consumers seeking information about bioterrorism and preparedness in general, the authors of this paper have developed a course that can be tailored to the needs of information professionals in a variety of settings. The intent is to prepare librarians to become even more active participants in community preparedness before, during, and after a crisis. The content of the course includes the history and background of bioterrorism, an introduction to preparedness planning and principles, and an overview of bioterrorism agents and resources. Course content is delivered through lectures and demonstrations, hands-on searching, and interactive exercises.
Results: Teaching this course has led to additional invitations to present it to other groups. These requests demonstrate the value and significance librarians place on learning about where to find accurate, current, and reliable information about bioterrorism resources. Interaction with the course attendees, and the course evaluations provide qualitative methods of evaluating the course content and instructional methods.
Conclusions: Information professionals who take the course demonstrate open-mindedness for learning about emergency preparedness. They anticipate that information resources will be crucial to protecting public health in the event of a disaster. The course content delivers vital information and provides knowledge for coping in uncertain and dangerous times.

134

Health Literacy: Reaching Students by *Un*teaching

Jennifer McCabe, health and human services librarian, CISAT Library, James Madison University, Harrisonburg, VA

Objective: In order to mimic the experience of low health literacy via a linguistic barrier, students enrolled in the "Introduction to Healthcare Informatics" class were asked to find health information in a variety of "foreign" languages.
Methods: Patient involvement in health care decision making was the topic of discussion, and students were asked to read an article on information prescriptions. Barriers to patient participation were discussed, including religious, cultural, linguistic, socioeconomic, and cognitive limitations. We also discussed the number of different cultures represented in the county in which the university is located. Students were then given a 3x5 piece of paper with a diagnosis and treatment written on it in a language other than English. A few students received their diagnosis in English. The instructor had a "key" that listed what each condition was. Students were told to use any resource available to decipher the instructions and get more information about the condition. They had one week to complete the assignment. The following week, we discussed the ways in which students got more information. Students talked about what resources they used and how long it took them. We compared the experiences of students who tried to interpret a foreign language with that of students who got their assignment in English. At the end of the class, we talked about ways that nonnative English speakers and low-literacy patients could be reached, using online resources and other technologies.
Results: Students reported that they spent from twenty minutes to four hours attempting to complete the exercise. In discussing the methods they used to interpret the diagnosis, we noted that they used most of the same kinds of information that non-English speakers do: friends,

family, and neighbors; churches and other places of worship; reference books; and the Internet.

Conclusions: Students were able to experience the frustration and associated obstacles to searching for health information in a language that was foreign to them. The class discussion was the most involved and rewarding of the semester, and students reported high satisfaction with the exercise.

136

Using News Feed Software to Deliver Current Awareness Information to an Academic Cancer Center

Frank Davis, AHIP, head, Reference Commons, Research and Education Division, Medical Center Library, and **Ken Huller**, systems analyst, Markey Cancer Center, University of Kentucky–Lexington

Objective: Create a seamless interface that allows a librarian to select and prepare customized news link reports obtained from Web resources and then automatically publish the reports to cancer center Websites in multiple formats.

Methods: A cancer center systems analyst and a liaison librarian evaluated software programs to determine the most efficient approach for transmitting selected news items to center Websites. Onfolio was chosen due to the easy learning curve and its strong capability to capture, annotate, and organize Web materials for publishing as customized RSS news feeds. The librarian regularly scans the Web and selects cancer news from freely accessible resources containing quality-filtered information, then prepares customized reports. The systems analyst configured a script that automatically transforms the extensible markup language (XML) RSS to display hypertext markup language (HTML). Reports are directly published from the librarian's desktop using file transfer protocol (FTP) to multiple sites on the cancer center Web server. A related project involves a selective dissemination of information (SDI) of publications by center researchers. SDI results are imported into EndNote software, where an oncologist administrator selects citations to be published in the center newsletter.

Results: Weekly cancer news is delivered to two Markey Cancer Center Web pages via Onfolio software. The decision was made to focus initial content from National Library of Medicine (NLM) sources. Different report criteria is delivered to each site. The Markey home page receives news items from MedlinePlus. The second site, devoted to clinical trials, receives PubMed citations and abstracts that are selected by the librarian, based on a SDI. Transfer procedures that convert XML RSS script to display HTML have worked flawlessly. Potential projects include creating a current awareness page for a statewide lung cancer prevention program and converting an EndNote publication database.

Conclusions: Onfolio RSS software is an effective tool that enables librarians to seamlessly provide quality-filtered news information to diverse Websites of an academic cancer center. The procedures for search techniques, software manipulation, and transmission protocols show great promise for being extensible to Websites for other medical disciplines.

138

Advocating for Medical Librarians: The Colorado Council of Medical Librarians Advocacy Committee Takes Action

Stephanie Weldon, reference librarian, Denison Memorial Library, University of Colorado and Health Sciences Center–Denver; **Karen Wells**, manager, Library Services, Exempla Lutheran Medical Center, Wheat Ridge, CO; **Margaret Bandy, AHIP**, manager, Exempla Healthcare Libraries, Exempla Saint Joseph Hospital, Denver, CO; **Jenny Garcia, AHIP**, UWIN coordinator and medical reference librarian, Libraries, University of Wyoming–Laramie; **Deb Weaver**, medical librarian, Forbes Medical Library, The Children's Hospital, Denver, CO; and **Julie Gaston**, sales representative, Sales, Majors, Westminster, CO

Objective: The Colorado Council of Medical Librarians (CCML) Advocacy Committee organized in 2003 due to hospital library closings and downsizing in Colorado. A plan has been implemented to promote hospital and medical librarians.

Methods:
1. In 2004, the CCML advocacy committee wrote a letter to be sent to hospital administrators on behalf of the National Network of Libraries of Medicine, MidContinental Region (MCR). This letter was made available on the MCR Medical Librarians Website for medical librarians to avail themselves of during October, National Medical Librarians Month. This advocacy initiative was replicated in three other regions.
2. The advocacy committee is planning to present an award to an administrator, for supporting their library, at the 2005 Colorado Health and Hospital Association meeting.
3. The advocacy committee has also been meeting with the Accreditation Committee of the Colorado Medical Society to request that they adopt the 2002 MLA Standards for Hospital Libraries and add a librarian to the accreditation survey team. Librarians offer a supportive role to make reasonable and balanced recommendations, which serve to increase information literacy and continuing education, thereby greatly augmenting the educational programs at each hospital site.

Results:
1. By May of 2005, we will have feedback on the results of the CCML advocacy letter having been sent to hospital administrators in three different regions.
2. We will also have our letters of request to present an award at the Colorado Health and Hospital Association finalized. Our award will be available for viewing at MLA '05.
3. Our work with the Colorado Medical Society will be documented, and, hopefully, a medical librarian will be on their accreditation survey team.

140

Building Health Sciences Collections with WorldCat on FirstSearch

Carol L. Watwood, AHIP, health sciences librarian, Department of Library Public Services, Western Kentucky University–Bowling Green,

Objective: WorldCat on FirstSearch has a unique value in collecting health sciences books and serials for several reasons: the huge size of the database, the enhanced keyword search, the user-friendly search interface, the availability of bound and unbound subject and geographic descriptors, the sorting of results by number of holding libraries, the detailed information about the type and number of holding libraries, the availability of in-process records for forthcoming books, and the inclusion of non-MARC data and links to nonlibrary Websites. I have used FirstSearch as an example because it is available free of charge to academic and public libraries in Kentucky through the Kentucky Virtual Library, but some of the other "newer" OCLC interfaces could be used in the same way.

Methods: Sample searches were done on WorldCat FirstSearch to demonstrate its value in collections development:
1. "nursing" AND 2004 (not fiction) (to identify "important" nursing books published in 2004 that might have been missed)
2. "nursing" AND "kentucky" (to find items with desired geographic emphasis)
3. frontier nursing service (to identify out-of-print items on a specialized topic)
4. Spanish English medical dictionary (year = 1995–2005) (to identify widely held recent titles on this subject)
5. Found on gift shelf: *Living with Stroke: A Guide for Families,* by Richard C. Senelik, published 1999 (Is this the latest edition; have

other academic libraries selected this book, or is it mainly held by public libraries?)

6. nursing standards (2000–2005) (sorted by number of holding libraries, does the selectors' library have "important" recent standards)

7. reputation of unfamiliar author/publisher (have works been widely collected by other academic libraries)

Results: Many useful items and updated editions for our library's collection have been identified through WorldCat.

Conclusions: WorldCat is a valuable tool in collection development for health sciences collections.

144

SPIRAL: Selected Patient Information Resources in Asian Languages

Amy LaVertu, assistant librarian, Information Services; **Eric Albright, AHIP**, director; **Cora Ho**, deputy director; and **Kate Kelly, AHIP**, head, Information Services; Health Sciences Library, Tufts University, Boston, MA

Objective: To report on a two-phase initiative to provide electronic access to health information for consumers and health care providers in Asian languages, specifically Chinese, Cambodian, Hmong, Korean, Lao, Thai, and Vietnamese. Phase one describes the creation of a Website and how providers were trained to use it. Phase two describes pushing the project out to a wider audience.

Methods: An academic health sciences library and New England's premier primary and preventive health center for Asian Americans combined resources to identify health care materials in Asian languages and to make these available electronically to health care providers and patients using a network of six neighborhood health centers. The poster will: describe the challenges in identifying appropriate materials in a variety of languages and displaying it in applicable character sets; identify best practices for training based on lessons learned; and describe issues in translating materials and promoting the project to a wider audience by distributing translations through a range of community-based organizations including public libraries, Asian community services organizations, churches, cultural centers, senior centers health centers, hospitals, and media outlets in the targeted areas.

Results: The Selected Patient Information Resources in Asian Languages (SPIRAL) Website has been linked from approximately fifty other Websites addressing Asian or minority health resources. Fifty-two providers were given training on the resources featured on SPIRAL as well as Website navigation. Promotional materials for SPIRAL have been distributed to over forty local health clinics, civic organizations, supermarkets, and public libraries, as well as selected health clinics across the country. The SPIRAL Website was demonstrated at a Chinese community health fair held in Boston, and Chinese-language SPIRAL materials were distributed. The SPIRAL project has been enthusiastically received.

Conclusions: We monitor user feedback via an email comments box and by keeping track of other sites linking to ours. Anecdotally SPIRAL has received favorable comments from providers and librarians. Future user evaluation: Tufts University medical students operate a free health clinic providing unscheduled care to medically underserved populations of the greater Boston area. Traditionally, this has meant residents of Chinatown. We intend to use this project to determine SPIRAL project's usefulness in practice.

146

Henry Norman Bethune, Innovative Surgeon, Vigorous Advocate of Democratic Medical Services, and International Humanitarian

Jie Li, AHIP, assistant director, Public Services and Education, Biomedical Library, University of South Alabama–Mobile; **Gang

(Wendy) Wu**, information services librarian, Shiffman Medical Library, Wayne State University, Detroit, MI; and **J. Michael Lindsay**, electronic resources and collection development librarian, Biomedical Library, University of South Alabama–Mobile

Objective: Describe a Canadian surgeon who contributed to mankind by inventing and documenting numerous surgical instruments, providing medical services to the poor and sick in both Canada and Untied States, advocating in universal health care system in Canada, fighting against the fascists in Spain, and helping Chinese fight the Japanese invasion during the World War II.

Brief Description: Henry Norman Bethune was born in Ontario, Canada, in 1890. After medical school, he served the poor in Detroit and Quebec areas. Bethune's invention of numerous operating instruments, his publications in medical journals, and his surgical techniques raised him to the international prominence. In 1936, while helping fight against the fascists during Spanish Civil War, he set up the first mobile blood-transfusion service that was the model for the later development of Mobile Army Surgical Hospital (MASH) units. In 1939, he went to China to help the Chinese fight against the Japanese invasion. On horseback, he led his mobile medical unit through northwestern China to inspect personnel, revamp hospitals, train Chinese in rudimentary medical techniques, and treat the wounded behind Japanese lines. Bethune died of blood poisoning from an operation during which he cut his figure in November 1939.

Conclusions: Canadian Medical Hall of Fame credited Bethune's impact on medicine, categorized into three distinct areas: his extensive writing on the development of new surgical instruments, his proposal of a universal health care system for Canada, and his being the first to introduce the mobile blood bank to the battlefield. However, Bethune will be most remembered as an international humanitarian who provided medical services to the less unfortunate. "Canada remembers Bethune as a medical genius, China reveres him as a saint."

148

Intranets: The Evolution of Library Knowledge Management

Melissa DeSantis, AHIP, assistant director, Public Services; **Julie K. Gaines**, second year associate fellow; **Lynda M. Howell**, information technology librarian; and **Gabriel R. Rios**, associate director, Public Services; Briscoe Library, University of Texas Health Science Center–San Antonio

Objective: This poster reports on results of a comparative review of several library intranets. The reported results will help other libraries gain valuable insight regarding the use, administration, and effectiveness of intranets for knowledge management in the library setting.

Methods: Academic medical libraries were targeted for this comparative review with an emphasis on medical libraries. Several academic library intranets were surveyed on the following features: administration, evolution, deployment, infrastructure, staff use, content responsibility, use for library knowledge management, and integration of external content such as informatics or open access blogs. Libraries were surveyed via the Web and responses were analyzed.

Results: Information presented includes: reasons for the existence of intranets in libraries, inventory of features and functionality, impact on library knowledge management, impact on internal communication, and future uses of intranets.

Conclusions: This study shows the variety of uses of intranets for library knowledge management.

150

Using Bibliometric Evidence as a Tool to Determine Developing World Research Priorities: A Preliminary Study

Andrea Ryce, National Library of Medicine associate fellow, Health Sciences Libraries, University of Washington–Seattle; **Sheldon Kotzin**, chief, Bibliographic Services Division, National Library of Medicine, Bethesda, MD; and **Karen Hofman**, director, Division of Advanced Studies and Policy Analysis, Fogarty International Center, Bethesda, MD

Objective: This study was undertaken to discover to what extent, if any, journals from developing countries are publishing research articles on chronic, non-communicable diseases and disorders (NCD) . Understanding where researchers in the developing world are focusing their energies may enlighten health research funding priorities. An analysis, by topic, of articles published in local journals from developing countries can be used as one indicator of the priority areas of scientific research in the country.

Methods: The occurrence of non-communicable chronic diseases is rising in developing countries as a result of changes imposed by industrialization, different food sources, and environmental degradation. The purpose of the analysis is to determine if this shift is reflected in published research or not and, if so, whether the movement is significant. Bibliometric principles were used to determine a country's publishing productivity in specific disease areas. Using MEDLINE, an indexing analysis was completed by searching a sample of journals for the frequency of specific Medical Subject Headings (MeSH) terms. The list of journals was created by choosing four publications from each World Bank region: Latin America, Middle East and North Africa, Sub-Saharan Africa, Europe and Central Asia, South Asia, and East Asia and Pacific. A list of general non-communicable disease topics was compiled and then converted to the applicable MeSH. An automated PERL script systematically searched the predetermined set of journals and topics in MEDLINE for the years 1998-2003.

Results: The journal sample during 1998 through 2003 yielded 16,524 articles, of which 7,012 (42.4%) were indexed with 1 or more of the 18 NCD topic terms. NCD topic retrieval among the chosen journals varied by region with the highest percentage of articles in Europe and Central Asia (47.8%) and the lowest in Latin America (36.4%).

Conclusions: This bibliometric analysis, while only a pilot study, reveals that even in regions with a large number of low-income or low-middle-income countries, substantial NCD research is ongoing. Analyzing the medical literature of local and regional journals could be useful to health policy makers in ascertaining areas of importance and concern.

152

Providing Online Medical Informatics Training: Is It Feasible?

Andrea Y. Griffith, reference librarian, and **Carlene Drake**, acting director, Del E. Webb Memorial Library; and **Jay Karolyi**, education developer; **Dave Gilsdorf**, education developer; and **Bill Colwell**, education developer; School of Medicine; Loma Linda University, Loma Linda, CA

Objective: To determine if an informatics workshop for medical students, featuring PubMed training and a searching assignment, can be successfully taught using an online course-management system.

Methods: During the first week of classes, first-year medical students were required to complete an online informatics workshop, developed in the Blackboard course-management system. Students completed an online PubMed tutorial, designed by School of Medicine education developers and librarians. Students were then asked to choose between several clinical scenarios and conduct a search in PubMed. Students submitted their search histories along with five relevant citations to the librarians. Each assignment was evaluated and given a numerical score based on the following criteria: relevancy of the citations, correct use of two Medical Subject Headings (MeSH) terms, application of at least

one subheading, proper use of limits, and use of Boolean logic. During the assignment week, in-depth support was available to students through a variety of Methods: in person, telephone or email.

Results: One hundred eighty-five first-year medical students completed the online informatics workshop. Eighty-seven percent of the medical students completed the assignment successfully, scoring either 100/100 or 90/100, on their first attempt. In an evaluation survey of the workshop, 95% of the students either strongly agreed or agreed that useful skills and techniques were gained in the workshop. While 47% of the students indicated that they completed the online informatics workshop without assistance; still, more than 50% of the students contacted the librarians or other support staff. Overwhelmingly, 98% of the students reported that they preferred completing the workshop in an online environment rather than a face-to-face session with the librarians.

Conclusion: Online medical informatics training can be successfully taught to first-year medical students; however, providing timely human support to students is a necessary component of success.

154

New Hire Nurses Orientation to Intranet and Online Information Resources

Mary K. Joyce, AHIP, library manager, and **Cheryl Erenberg**, librarian, Shinn-Lathrope Health Sciences Library, Morristown Memorial Hospital, Morristown, NJ

Objective: To implement an orientation program for newly hired nurses to familiarize them with the library and information resources available on our hospital intranet. This will facilitate the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) TRACER method by ensuring that the hospital nurses can justify patient care decisions using reliable information resources.

Methods: Our hospital is a large teaching hospital with over 600 beds and is part of a health system with 2 other hospitals. This project included only our hospital. The nursing education department asked the health sciences library staff to implement a mandatory 2-hour intranet orientation session for all new nurse hires. Fifteen sessions were held with approximately 8–10 nurses at each session. This course encouraged nurses to use online databases to obtain current pharmaceutical information, nursing research articles, patient education tools, and evidence-based guidelines. It also familiarized them with online hospital policies, JCAHO manuals, and other departmental information on our intranet. As part of the course, attendees received a resource packet on how to access the online information reviewed. In addition, the same packet was placed at every nursing station throughout the hospital.

156

Assessing Online Use: Are Statistics from Web-based Online Journal Lists Representative?

Rick Ralston, document delivery director, and **Carole Francq Gall, AHIP**, gift development officer, Medical Libraries, Indiana University–Indianapolis

Objective: To determine whether use statistics generated from a list of online journals on a library Website is indicative of total use of a journal as reported in use statistics supplied by the content provider.

Methods: Our library has use statistics for all of our online journals from the vendor who generates our Web-based online journals list. These statistics are not comprehensive, however, in that they only record accesses of a journal from the list. In order to bypass the laborious process of compiling content-provider statistics from several sources, we test the hypothesis that use statistics from our online journals list are indicative of total online use, even though they are not comprehensive. We will compare use statistics from the list on our Website with use statistics from the content provider for each of our electronic jour-

nals. We will then analyze the extent of variation in each title's rank, based on use according to statistics from the online list and use according to content provider statistics.

Results: Of 469 titles analyzed, 253 (54%) were ranked higher based on Website statistics than they were based on content-provider statistics. The range of variation in rank was 1–300, and the average was 68. There were 209 (45%) titles that ranked higher based on content-provider statistics. The range of variation for these titles was 1–321, and the average was 82. Seven titles had no variation. Fifty-one percent of the titles in the list were displaced by more than 47 positions, or 10% of total positions in the list. The average variation in rank for all titles was 73.

Conclusions: The way users access online journal content varies considerably among titles. Titles from two disciplines that were severely undercounted by the online journals list skewed the results considerably. Use statistics from our online journals list are not indicative of total online use as reported by content providers.

158

The Wisconsin National Primate Research Center Digital Library: Leveraging Technology and the Web to Serve a Worldwide Community

Cynthia K. Robinson, AHIP, director, Library and Information Service; **Raymond Hamel**, reference/special collections librarian; **Joanne Brown**, technical services librarian; and **Matthew Hoffman**, Internet services/outreach librarian; Wisconsin National Primate Research Center Library, University of Wisconsin–Madison

Purpose: This poster reports on the use of the Web to provide access to a variety of information services and resources supporting the biomedical research communities who utilize nonhuman primate models for basic and applied research into human health and disease.

Setting/Participants/Resources: The Wisconsin National Primate Research Center (WNPRC) Library is a small, highly-focused library located in the National Primate Research Center, University of Wisconsin–Madison. The library, through grants (RR000167 and RR015311) from the National Center for Research Resources of the National Institutes of Health (NCRR/NIH), supports a wide variety of information services and resources available via the Internet. The WNPRC Library serves a worldwide community of users with a particular focus on the eight National Primate Research Centers.

Description: Primate Info Net (PIN) <pin.primate.wisc.edu> serves as the gateway and organizing element to the library's suite of services and resources. First developed in 1993 as a Gopher site, PIN has emerged as the major Web resource in the field of primatology. As an interdisciplinary field, primatology draws scientists and researchers from many domains, covering the gamut from stem cell research to conservation and veterinary care. The unifying element is an interest in nonhuman primates. PIN links to fact sheets, audiovisual items, bibliographies, and animal welfare resources developed at the Wisconsin center and more than 3,000 external resources. Users can access and search the PrimateLit database and the International Directory of Primatology. They can request documents, search for jobs, ask a reference question, or participate in a discussion list. Other resources include the Primates in Biomedical Research page, a database of digitized images from the library's collection, the federally funded Primate Research page, and the Primate-News service.

Results: This ongoing project is highly regarded by both the scientific research community and the NCRR/NIH as evidenced by their ongoing support both through use of the site and financially. New features continue to be added, and the site is frequently updated.

Evaluation: Use and user satisfaction are evaluated through a gate count mechanism with the ability to breakdown stats by individual service or resource. Additional feedback is acquired through spontaneous user commentary.

160

Developing a Customized Database System for Managing Electronic Resources

Maggie Wineburgh-Freed, AHIP, head, Technical Services Division; **Janis F. Brown, AHIP**, associate director, Systems and Information Technology; and **Janet L. Nelson**, associate director, Educational and Research Services; Norris Medical Library, University of Southern California–Los Angeles

Objective: To describe a customized electronic resources database system, focusing on its use for electronic resources management and for providing a Website of the library's electronic resources. The information provided will be useful to others developing a similar in-house system or for evaluating commercial systems that have emerged since the initiation of this project.

Methods: As the number of electronic journals acquired exploded, the medical library needed a database solution to manage licensed electronic resources. Paper management systems were no longer functional. Staff needed to access information simultaneously to eliminate inputting similar data into multiple systems and required an effective data-tracking method. When the university decided to revise the database it was using to create Web pages of electronic resources, the library took the opportunity to add electronic resource management functions. Through an iterative process, the medical library and the university library worked with a programmer from the university Web services group. Needs were determined, fields and records discussed, and search interfaces and results pages were developed. The system is maintained in a MySQL relational database with a Web-based administrative module created with PHP.

Results: Once the system was developed and testing completed, librarians and staff updated data transferred from the old database and added data for the new fields. The database includes bibliographic information, access restrictions, license and vendor data, etc. Library staff can easily manage changes in vendors, gateways, and licenses that affect many journal titles by simply revising one global record. The new database includes both licensed and free electronic resources in all formats. The new system was launched in time for the new academic year. Data revisions and additions are ongoing. System modifications are made as necessary.

Conclusions: The new system is a vast improvement over the previous paper system. All management information is now conveniently available to multiple internal users, and informational notes can be included that are easily accessed. The database also provides much more flexibility and searching functionality for the public eResources Website.

162

Piecing Together the Research Puzzle: A Library Liaison Campaign for Customized Presentations to Researchers

Janet G. Schnall, AHIP, information management librarian, and **Joanne Rich**, information management librarian, Health Sciences Libraries, University of Washington–Seattle

Objective: Describe a marketing campaign offering customized presentations to update researchers on the latest and best methods of information searching through a rapidly expanding array of Web-based tools and other resources to help them save time, search smarter, and track their impact as researchers.

Methods: The University of Washington Health Sciences Libraries is part of a large, academic center serving six health sciences schools. In the Piecing Together the Research Puzzle campaign, library liaisons contacted departments offering customized presentations of information resources to researchers. Presentations vary between ten minutes and an hour, are designed for a one-time session or as a continuing

series to be held in the department or library, and are selected by the faculty from a set of sixteen modularized topics (e.g., "Finding Measurement Tools," "Email Alerts," "Effective Searching of the Web of Science," "Finding Grants," "Beyond Google," "Getting Started with EndNote," "Bioresearcher Tools" <healthlinks.washington.edu/hsl/puzzle/>). Each liaison developed one topic outline for the larger liaisons group for their use in teaching. Modules are developed to be presented in as little as ten minutes and can be "mixed and matched" customized to the intended group.

Results: Liaisons submitted an online evaluation form detailing their activities related to the campaign, including the outcomes. The campaign generated a number of teaching sessions and provided a means of outreach to our researchers, both on and off campus.

Conclusions: Informal feedback on reasons for the campaign's success included: effective publicity, including eye-catching logo, poster, and Website; innovative flexibility to "mix and match" or create new topic modules; and customization of place and timing for individual departments. A biennial marketing campaign continues to be a useful vehicle for providing a cohesive approach to sustain the library's profile in our community and to create events to interface with its individual members.

164

Information-seeking Practices of "In-person" Support Groups: A Baseline Survey

Andrea M. Ketchum, AHIP, reference librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: Although there has been much written about consumer use of the Internet for seeking health information and participating in on-line support groups, "in-person" support groups have remained largely ignored. To address this gap, a brief survey was conducted to establish a baseline of information-seeking practices in in-person support groups. We can then begin to compare online to in-person information-seeking behaviors to identify weaknesses and strengths.

Methods: Leaders from fifty-five support groups sponsored by the University of Pittsburgh Medical Center (UPMC) for a variety of diseases and conditions were asked to respond to six multiple-option questions concerning the kinds of questions asked by consumer participants, how questions are transmitted and to whom, where answers are sought, and how information and answers are disseminated. Subjects were from fourteen regional locations, and facilities ranged from general clinical/surgical care to specialized cancer, pediatric, obstetrics/gynecology, psychiatric, and rehabilitation centers. Responses were tallied and summarized.

166

Overcoming Challenges: Lamar Soutter

Robert Vander Hart, electronic resources librarian; **Judith Nordberg**, reference associate; and **Gael Evans**, reference librarian (retired); Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: This poster chronicles the life and career of Lamar Soutter, who overcame both personal and professional challenges in becoming the founding dean of the University of Massachusetts Medical School. Our objective is to demonstrate how the fields of medicine and medical education have benefitted from Soutter's determination to meet and overcome adversity in his life.

Methods: A Web-based exhibit highlighting Soutter's life was developed recently by a team of librarians. By making extensive local and national contacts, we were able to assemble a chronology of life events for Soutter. Our research has revealed that throughout his life, Soutter has overcome several distinct personal and professional challenges.

Significant contributions to medicine and its practice have been the result, including the establishment of a blood bank and the creation of a new state medical school. Other events include a research expedition through uncharted territory in the Yukon, during which he and a companion nearly lost their lives, and his gallant service in World War II as a field surgeon behind enemy lines during the Battle of the Bulge.

Results: The Lamar Soutter Website exhibit is available at library.umassmed.edu/soutter/.

Conclusions: Soutter overcame personal and professional adversity to achieve distinction as a scientist, physician, educator, and humanitarian.

168

Library Instruction Integrated in Herbal Medicine Courses for Pharmacists: Two Teaching Approaches, One Goal

Mariana Lapidus, librarian, Sheppard Library; **Alice Gardner**, assistant professor, Pharmacology/Toxicology, Department of Pharmaceutical Sciences; **Irena Dryankova-Bond**, librarian, Blais Library; and **Lana Dvorkin**, associate professor, Department of Pharmacy Practice; Massachusetts College of Pharmacy and Health Sciences–Boston

Objectives:
• To compare the library instruction components of two herbal medicine courses at the Massachusetts College of Pharmacy and Health Sciences
• To assess the students' information skills as the outcomes of the traditional didactic teaching course (Boston) versus a problem-based learning course (Worcester)
• To emphasize the roles of library instruction and faculty-librarian collaboration in implementing the courses

Methods:
• The library instruction components of the two courses in Boston and Worcester campuses are compared in terms of design, implementation, and educational outcomes.
• The students' herbal information skills are assessed with the help of a questionnaire.
• The students' learning outcomes for both courses are compared to determine future library instruction implications.

Results: The comparison of the library instruction components indicated a number of differences and similarities in course design, implementation, and educational outcomes of two courses. Fourteen students were surveyed in Boston and fifteen students in Worcester; as the result of the surveys, significant improvement in students' information literacy and problem-solving skills was observed. The need to apply creative teaching techniques to the process of finding and evaluating information on herbs and dietary supplements by pharmacists was emphasized.

Conclusions: The study indicates considerable potentials of both traditional didactic teaching and problem-based teaching approaches and demonstrates their effectiveness in educating pharmacy students about herbal medicine. Successful collaboration between two departments and two campuses proved to be extremely beneficial for pharmacy students.

170

Responsible Literature Searching for Research: A Self-paced Interactive Educational Program

Charles B. Wessel, coordinator, Affiliated Hospital Services; **Nancy H. Tannery**, associate director, Information Services; and **Barbara A. Epstein, AHIP**, director; Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: An academic health sciences library developed a self-paced interactive educational program that teaches the fundamentals of responsible literature searching for research practice.

Methods: This Web-based educational program provides a conceptual framework, instruction, and guidelines on:

1. principles and recommended practices for the biomedical literature search process

2. identification and classification of major information resources

3. the role of reference librarians in the literature search process

4. the limitations of various information resources

5. determination of what is an adequate literature search for topics such as drug safety and identification of adverse events.

Quizzes test participants' proficiency. An Advisory Committee of experienced medical reference librarians from member libraries of the Association of Academic Health Sciences Libraries (AAHSL) evaluated the content and recommended changes and enhancements during the development of the interactive program. A selected sample of users provided feedback on content applicability, clarity, comprehensiveness, and ease of use.

Results: This program is part of the University of Pittsburgh's Education and Certification Program in Research Practice Fundamentals (RPF). RPF offers training modules in research conduct. University policy requires researchers to complete one or more RPF modules applicable to their research before the institutional review board (IRB) can approve their research. This module serves as a model for development of similar programs in other centers.

Conclusions: This interactive educational program will be promoted through AAHSL libraries, and Association of American Medical Colleges (AAMC) institutions, and content will be made available to academic health sciences libraries and medical centers.

172

Wisconsin Health Information Outreach Summit

Ulrike Dieterle, distance/outreach coordinator, Ebling Library, University of Wisconsin–Madison

Objective: Purpose of the summit was to gather together providers and recipients of health information outreach services in one place to communicate:

• what we do

• how we do it

• and for whom

To provide a greater awareness of health information outreach activities in Wisconsin and establish new contacts and ideas for future collaboration between varying groups involved in health information transfer, teaching, and patient care. Summit participants will plan innovative ways of working together to bring health information to all residents of the state.

Methods: The summit was an all-day event, from 9:00 a.m.–4:00 p.m. and included:

• brief presentations highlighting services and resources currently offered by groups or individuals in the business of providing health information outreach

• opportunities to network and discuss potential collaborations and partnerships with health-based information outreach initiatives

• formal communication and documentation of outreach needs, both current and future

• increased awareness of target populations served and underserved

• increased understanding of health information outreach opportunities available throughout Wisconsin

Fifty people from thirty-one different Wisconsin organizations, including librarians, educators, researchers, public health professionals, clinicians, students, outreach specialists, consultants, were invited for this

event. A small award grant from the National Network of Libraries of Medicine, Greater Midwest Region (NN/LM GMR) provided funding to cover parking, travel, and a per diem. Participants brought handouts to share. Assessments and evaluations were conducted to rate the success and to provide information to match future partners and collaborators. All information is being mounted on the Web for easy access and reference.

174

Emergency Medical Information in Evidence-based Medicine Resources

Shinichi Abe, librarian, and **Tomoko Yamada**, librarian, Medical Information Center, School of Medicine, Jikei University, Tokyo, Japan

Objective: New information resources, such as evidence-based medicine (EBM) resources, have been developed so that clinicians can retrieve information quickly. The most recent information in EBM resources often lag six months to one year after original publication. In contrast, emergency information about new infectious diseases, such as severe acute respiratory syndrome (SARS), circulates quickly but in overly large quantities. If such emergency medical information is included in EBM resources, clinicians might find relevant information more easily.

Methods: We investigated the reliability and freshness of information in EBM resources. As examples of EBM resources, we focused on the Cochrane Library, Clinical Evidence, and UpToDate. We searched these EBM resources for information on SARS, West Nile fever, and hormone replacement therapy.

Results: We found that for these topics, UpToDate included the most recent articles and is therefore a good source for emergency medical information.

Conclusions: Medical librarians should understand the advantages and limitations of such EBM resources and be able to advise clinicians about their use.

176

Multi-institutional Collaborative Grants: Managing Geographic and Institutional Diversity

Erinn E. Aspinall, National Library of Medicine second-year fellow; **Patricia Bradley**, tribal liaison librarian; and **Jonathan Eldredge, AHIP**, coordinator, Academic and Clinical Services, Health Sciences Library and Informatics Center, University of New Mexico–Albuquerque; **Claire Hamasu**, associate director, National Network of Libraries of Medicine, MidContential Region, Salt Lake City, UT; **Jeanette McCray, AHIP**, deputy director, Arizona Health Sciences Library, University of Arizona–Tucson; and **Janis Teal, AHIP**, deputy director, Library Services, Health Sciences Library and Informatics Center, University of New Mexico–Albuquerque

Objective: To present a model for developing, managing, and implementing multi-institutional collaborative funding that addresses challenges related to geographic and institutional diversity.

Methods: Program Evaluation: This poster will address the topic of multi-institutional collaboration through a study of Tribal Connections Four Corners, a National Network of Libraries of Medicine (NN/LM) subcontract-funded project that is being carried out by seven institutions in six states. A retrospective analysis will be used to review the methods for developing, managing, and implementing the project. The findings of an external consulting group, which will be examining the collaborative aspect of the project, will be incorporated when relevant.

Results: The program evaluation will result in the identification of best practices and lessons learned while developing, managing, and implementing the multi-institutional collaborative grant.

Conclusions: Collaborative funding provides an opportunity to distribute the benefits of a project to a wider audience. This, combined with the increased focus on interorganizational collaboration by the National Institutes of Health, illustrates the need for developing and sharing various models for managing multi-institutional projects. This poster will present one model for addressing the challenges that develop from the institutional and geographic diversity inherent in interorganizational collaboration. As a result, those involved in or seeking multi-institutional funding will be better prepared to manage the collaborative project from its development through its implementation.

178

Portraying US-Mexico Border Environmental Health Concerns

Erinn E. Aspinall, National Library of Medicine second-year associate fellow, Health Sciences Library and Informatics Center, University of New Mexico–Albuquerque; **Cynthia B. Love**, technical information specialist, Specialized Information Services Division, National Library of Medicine, Bethesda, MD; and **Mary Higgins**, art director, Activ8 Designs, Alexandria, VA

Objective: Create a Web-based illustrated view of a generic US-Mexico border scene that highlights common environmental health concerns along the border and links to selected Web resources on those concerns and on toxic chemicals that might be found in the region.
Methods: Work closely with librarians, public health workers, educators, and government contacts in the border states of Texas, New Mexico, Arizona, and California to ensure that the border scene accurately reflects the "look" of the area and comprehensively represents environmental health concerns in the region. These advisors provided photos and background information, expert review of content, solicited feedback from audiences in the border region, and suggested ideas for introducing this new Web resource to both their peers and the concerned public.
Results: The US-Mexico Border neighborhood was released in spring 2005 as a new scene in Tox Town <toxtown.nlm.nih.gov>, the National Library of Medicine Website that introduces toxic chemicals and environmental health issues.
Conclusions: When creating a graphical representation of a specific geographic area and the people who live there, it is crucial to work with local contacts to ensure accuracy and comprehensiveness of content and determine usefulness in that region.

180

Regina Benjamin: Serving the Underserved Poor in Alabama's Gulf Coast

Clista Clanton, Web development and education librarian, and **Ellen Sayed, AHIP**, information services librarian and interlibrary loan coordinator, Baugh Biomedical Library, University of South Alabama–Mobile

Objective: This poster will highlight the career and medical contributions of Regina Benjamin, a physician who has chosen to practice medicine in an underserved region of Alabama.
Methods: While in school, Benjamin signed up with the National Health Service Corps, which helps pay tuition in exchange for working in underserved areas. After fulfilling that obligation by working in Irvington, Alabama, she started a family practice in Bayou La Batre, one of the poorest areas in Alabama. While Benjamin's service to her community is extraordinary, she has also distinguished herself by being the first African American woman and the first woman under forty to be elected to the American Medical Association (AMA) Board of Trustees, the first African American woman president of a state medical society in the United States, and the recipient of the 1998 Nelson Mandela Award for Health and Human rights. Benjamin does not draw a salary from her clinic, instead relies on her salary as the assistant dean for rural health for the college of medicine.

182

Samuel B. Woodward: A Nineteenth Century Pioneer in American Psychiatric Care

Janet L. Dadoly, librarian, Reference and Collection Development; **Lisa Palmer**, catalog librarian; and **Leonard L. Levin, AHIP**, manager, Educational Programming; Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: Showcase the life and work of Samuel B. Woodward, the medical superintendent of one of the first public hospitals for the mentally ill in the United States, the Worcester State Hospital in Worcester, Mass. Woodward overcame then-popular views of mental illness to champion compassionate, optimistic, and individualized treatment for patients.
Methods: Samuel B. Woodward brought a significant paradigm shift to the dark world of mentally ill indigent citizens of Massachusetts in the early nineteenth century. When Woodward became the first superintendent of Worcester State Hospital in 1833, mentally ill patients were viewed with suspicion and fear and were usually relegated to prisons and poorhouses. Woodward rejected a supernatural explanation of mental illness that was very popular at that time. He believed mental illness was a somatic disease, not unlike other diseases. His approach, called "moral therapy," consisted of kind, compassionate, individualized care that respected the patient as a human being. Woodward was also instrumental in the burgeoning field of psychiatry. He was a prolific writer and became the first president of the organization that would later become the American Psychiatric Association.

184

Acquiring a Taste for Research: "What do Medical Librarians Want? The Kiss Test"

Nancy G. Burford, assistant professor, and **Robin Sewell**, assistant professor, Medical Sciences Library, Texas A&M University–College Station

Objective: To determine if there is a preference between dark and milk chocolate in medical librarians.
Methods: Informal polling of faculty and visiting librarians at the Medical Sciences Library has shown that more librarians prefer dark chocolate to milk chocolate. Does this reflect the age of those polled? Research shows that as people age, their chocolate preferences change, usually from milk chocolate to dark chocolate. Or do the results of the informal polling somehow reflect an individual's personality and choice of profession? The authors conducted an oral survey at MLA '04. Participants were asked two basic questions: (1) What type of chocolate they preferred to eat (milk, dark, both, neither), and (2) Has this preference changed over time (yes, no, what changed). This survey may be repeated in the future at other meetings to determine if the preferences of medical librarians differ from a more generalized group of librarians or if the preferences of librarians differ from the general population.

Note: Due to withdrawn and renumbered posters, some poster numbers have not been used.

BESTSELLERS

FROM MLA PUBLISHING

1 Deciphering Medspeak Brochure (English)
(Sold in packs of 50.)

MLA Member price: $14.00
Nonmembers: $20.50

2 History of the Health Sciences,
second revised edition
Stephen J. Greenberg, and
Patricia E. Gallagher, AHIP

MLA Member price: $27.00
Nonmembers: $41.00

3 Deciphering Medspeak Brochure (Spanish)
(Sold in packs of 50.)

MLA Member price: $14.00
Nonmembers: $20.50

4 Marketing the Consumer Health
Information Service
Kay McCall, AHIP

MLA Member price: $40.00
Nonmembers: $50.00

5 Collection Development and Management for
Electronic, Audiovisual, and Print Resources
in Health Sciences Libraries (Print version)
Linda Walton; Christa M. Modschiedler, AHIP;
Patricia M. Rodgers, AHIP;
BJ Schorre, AHIP; Julie Schneider;
Judith L. Rieke; and Hope Barton

MLA Member price: $50.00
Nonmembers: $75.00

6 Hay/MLA 2001 Compensation and
Benefits Survey (PDF File)

MLA Member price: $40.00
Nonmembers: $75.00

7 Organization Charts of Academic
Health Sciences Libraries (Print version)
Natalie Norcross, AHIP

MLA Member price: $15.00
Nonmembers: $23.00

8 Collection Development and Management for
Electronic, Audiovisual, and Print Resources
in Health Sciences Libraries (PDF version)
Linda Walton; Christa M. Modschiedler, AHIP;
Patricia M. Rodgers, AHIP; BJ Schorre, AHIP; Julie
Schneider; Judith L. Rieke; and Hope Barton

MLA Member price: $35.00
Nonmembers: $52.00

9 Sync or Swim: PDAs in Health Care
(Individual tape)

MLA Member price: $94.00
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