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Supplement to Official Program

MLA '04 Abstracts

May 21–26, 2004
Washington, DC

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Award-winning samples will be published in *MLA News* and will appear on MLANET.

MORNING OF INNOVATION

Wednesday, May 26, 2004, 10:00 a.m.–noon

Cease the power: returning scientific publishing to the academy

Cosponsored by Collection Development Section, Technical Services Section, and Public Services Section.

Mark E. Funk, AHIP, Samuel J. Wood Library, Weill Medical College of Cornell University, New York, NY; **Helen J. Doyle,** director, Development and Strategic Alliances, Public Library of Science, San Francisco, CA; **Chi V. Dang,** professor, Medicine, Oncology, Pathology, and Molecular Biology, and genetics director, Division of Hematology, School of Medicine, Johns Hopkins University, Baltimore, MD; and **Linda Watson, AHIP,** director, Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Brief Description: This invited paper session will focus on the open access movement as an innovative alternative to the serials crisis currently threatening access to the scientific literature. Invited speakers will represent the main players in this movement: open access publishers, academicians, and librarians. An open access publisher will speak of the overall philosophy of open access. An academician will speak on faculty publishing habits and how to encourage submissions to open access journals. A librarian will focus on how we can help grow the open access movement in our own institutions.

Format of Session: Invited papers

Filtering without fear: the librarian's role in distilling knowledge

Cosponsored by MLA Board of Directors, Task Force on Expert Searching, Health Information Literacy Task Force, Task Force on the Information Specialist in Context, and Clinical Librarians and Evidence-based Health Care SIG.

Patricia L. Thibodeau, AHIP, association dean, Library Services, Medical Center Library, Duke University, Durham, NC; **Rebecca Jerome,** assistant director, Filtering and Evidence-Based Services, Eskind Biomedical Library, Vanderbilt University, Nashville, TN; **Susan Meadows,** adjunct assistant professor and medical librarian, Department of Family and Community Medicine, University of Missouri–Columbia; **Martha Harris, AHIP,** medical research librarian, VERDICT, Audie Murphy Memorial VA Hospital; **Robert Swain,** information fellow, Centers for Disease Control, Atlanta, GA; **Kathleen Oliver,** associate director, Communication and Liaison Services, Welch Medical Library, Johns Hopkins University, Baltimore, MD; **Clinical Librarians and Evidence-based Health Care SIG; Task Force on Expert Searching; Health Information Literacy Task Force;** and **Task Force on the Information Specialist in Context**

Brief Description: The Institute of Medicine's reports underscored the need for evidence-based knowledge at the point of care but stated that this information must be in more usable format for the clinician. Discussions and presentations at the National Health Information Infrastructure '03 Conference echoed that filtered evidence-based information must be part of the electronic health record and clinical information systems. While national practice guidelines have begun to address this need, they have only scratched the surface of the many conditions that are encountered by clinical decision makers. Librarians have always evaluated literature, assessed needs, and filtered resources to find the best information, but now the challenge is now to take these skills to a higher level. As part of the health care team, librarians must use their traditional skills to find the best practices and distill them into information that is usable at the point of decision making. This program will explore several models and discuss how librarians can build their skills and confidence in distilling knowledge-based information into actionable information for the busy clinician, researcher, and consumer.

Format of Session: The first half-hour will allow participants to view invited posters prepared by the speakers and relevant units of MLA, such as sections, SIGs, and task forces working on issues related to filtering. The posters will be in a standard structured format and will be asked to address specific questions or issues to be covered in the remaining program. A moderator, with the poster presenters as a panel, will then conduct a town meeting giving participants a chance to ask questions of speakers, share their own experiences, and discuss concerns about training and personal development. Each participant will receive a self-evaluation checklist to determine additional skills they might need, as well as make suggestions for future programming and training offered by MLA.

Seize the power of the next generation: innovative ways to recruit young and diverse librarians

Cosponsored by Ad Hoc Professional Recruitment and Retention Committee; Relevant Issues Section; Medical Library Education Section; Membership Committee; African American Medical Librarians Alliance SIG; and Lesbian, Gay, Bisexual, and Transgendered Health Sciences Librarians SIG.

Elizabeth Irish, AHIP, head, Public Services, Schaffer Library of the Health Sciences, Albany Medical College, Albany, NY; **Jana Bradley, FMLA,** director, Master of Library and Information Science Program, School of Information Studies, Syracuse University, Syracuse, NY; **Ellen Detlefsen,** associate professor, Department of Library and Information Science, School of Information Sciences, University of Pittsburgh, Pittsburgh, PA; and **Kathryn Skhal,** interlibrary loan assistant, Carlson Health Sciences Library, University of California–Davis, and student, LEEP, University of Illinois–Urbana-Champaign

Description: How can we convince the next generation to join us in building the library profession of tomorrow? Our three speakers will provide food for thought as they discuss current programs and viewpoints on attracting new blood to our profession and then react to audience ideas and questions on recruitment. Jana Bradley, FMLA, associate professor and director of the Master of Library and Information Science Program, School of Information Studies at Syracuse University, will present the program's vision for educating leaders for libraries in the digital age, including their threefold

emphasis on foundational preparation, knowledge, and skills in the digital information environment, and acquaintance with practices in real-life libraries. Ellen Detlefsen, associate professor, Department of Library and Information Science, School of Information Sciences, University of Pittsburgh, will report on the "Highmark Minority Health Link Project," a fellowship program focused on recruiting and graduating African American medical librarians. Kathryn Skhal, a graduate student in University of Illinois–Urbana-Champaign's LEEP distance education program, will discuss recruitment from the viewpoint of a new librarian. Join us for a thought-provoking session on how we can successfully stem the graying tide and increase diversity in our profession.

Format: Three contributed papers and one discussion session. Papers will be selected to represent the following groups: a recruiter/educator who has implemented an innovative program, a student who can speak about selecting health sciences librarianship as a career, and a speaker who can address diversity issues in recruitment: how to attract members of minority populations to librarianship. If necessary, a speaker will be recruited in place of one of the papers to ensure that the program meets the goals of the sponsors.

SECTION PROGRAMMING 1

Consumer and Patient Health Information and Hospital Libraries Sections

Power in the Trenches

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Invited Speaker Panel

Panel Discussion

Jo-Ann Benedetti, AHIP, head, Health Information Services, Crandall Public Library, Glens Falls, NY; **Barbara Bibel,** librarian, Oakland Public Library, Oakland, CA; **Pat Hammond, AHIP,** community health education center librarian, Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond; and **Joy Kennedy,** librarian, Health Resource Library, Northwest Community Healthcare, Arlington Heights, IL

Jo-Ann Benedetti, AHIP, is currently the head of Health Information Services at Crandall Public Library in Glens Falls, NY. She is responsible for planning, implementation, and overall supervision of the consumer health project at Crandall. She also provides health/medical reference training to public librarians across New York State and has developed consumer health curricula for use by the National Network of Libraries of Medicine.

Barbara Bibel is reference/collection development librarian for Oakland Public Library, where she is responsible for both staff and public training programs. She is book review editor for the Consumer and Patient Health Information Section newsletter Consumer Connections and regularly reviews books for several other publications. An MLA-certified Consumer Health Information Specialist, she is also an MLA continuing education instructor.

Pat Hammond, AHIP, has been the Virginia Commonwealth University Health System's (VCUHS) Community Health Education Center (CHEC) Librarian since 2002. CHEC is a partnership of the VCUHS, the Medical College of Virginia Hospitals Auxiliary of VCUHS and the VCU Libraries. She has managed daily operations since the opening of the Center. This includes training and supervising a volunteer staff of fifteen, building and organizing a consumer health collection, coordinating internal and external promotional activities, managing budgets and teaching educational classes.

Joy Kennedy is librarian at Northwest Community Hospital in Arlington Heights, Illinois (a suburb of Chicago). As well as running the hospital's professional library, she has set up a Cancer Patient Library, a Wellness Center Library, and, her current project, a Community Health Resource Library using funds donated by the Hospital Auxiliary. She's also on the hospital's multidisciplinary Patient Education Committee and set up and administers the patient education Website on the hospital intranet.

Educational Media and Technologies, Medical Informatics, International Cooperation, and Public Health/Health Administration Sections

Educating the 21st Century Health Professional

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Contributed Paper Session

2:05 p.m.

Finding measurement tools "any time, any place": an interdisciplinary, self-help Web tutorial

Janet G. Schnall, AHIP, information management librarian, Health Sciences Libraries; **Angela Lee,** head, Social Work Library; and **Joanne Rich,** information management librarian, Health Sciences Libraries; University of Washington–Seattle

Objective: Demonstrate an alternative model for developing Web tutorials incorporating new technologies for informatics instruction to be used "any time, any place," using the subject of how to find measurement tools as an example.

Methods: The University of Washington Health Sciences Libraries is part of a large urban academic health sciences center serving six health sciences schools. For many years, informatics instruction by library liaisons has been integrated into the schools' curriculum. With more students taking distance learning classes and using the emerging digital library, librarians began investigating methods for offering informatics instruction in ways other than traditional lecture or hands-on in computer labs. In developing a Finding Measurement Tools Web tutorial, a question-type, process-oriented model was used, based on users' most frequently asked questions and the detailed process needed to get from question to answer instead of the traditional resource design. New technologies were also included for the online resources to support different learning styles: Sample Search Videos (streaming videos produced by Camtasia) and Try It (interactive exercises: direct link to the resource accompanied by a second window with detailed instructions for searching).

Results: There was improvement in searching for instruments as shown in a preliminary pre- and post-tutorial evaluation conducted by online questionnaire in summer 2003. There is also a questionnaire assessing usefulness and student/faculty satisfaction with the measurement tool included in the tutorial. Based on positive results in evaluation, Web tutorials and Web instruction pages are now being "annotated" with streaming video, thus enabling "any time, any place" instruction. The original intent of the project was to find an easier way to answer measurement tools questions for both our on- and off-campus users. The project, however, has led to a more interesting exploration into tutorial design and streaming videos.

Conclusion: More detailed evaluation of the tutorial and technologies used is planned for spring and summer 2004. In addition, this study hopes to encourage the examination of other designs and technologies for presenting and teaching information to users.

2:25 p.m.

Sharing our power: how librarians can contribute to the life-long learning of primary care physicians in the United Kingdom

Tamara Rader, information specialist, and **Andrea Lane,** information specialist manager, BMJ Knowledge, BMJ Publishing Group, London, United Kingdom

Objective: To measure user satisfaction of librarian-driven electronic learning modules for primary care physicians.

Methods: Retrospective cohort study: Information specialists at the BMJ Publishing Group undertook to create e-learning modules aimed at improving the evidence-based medicine (EBM) skills of general practitioners. Module topics included an introduction to different types of medical literature, critical appraisal skills, understanding statistics in medical articles, and practical tips for incorporating searching into a busy schedule. Despite widespread awareness of EBM concepts, physicians may still require practical information skills to make full use of research in their practice.

Setting: Internet-based, e-learning platform.

Participants: Primary care physicians. The modules are delivered via the unique e-learning environment found at www.bmjlearning.com as part of the appraisal and revalidation process of practicing doctors in the United Kingdom.

Evaluation: We will survey users post-completion of the modules about their level of satisfaction in finding answers to clinical questions.

Results: Features of the e-learning system will be demonstrated, and the content will be discussed. Early findings show moderate satisfaction with librarian-driven e-learning modules. Most users agree that the topics are relevant to their work and the interface is easy to navigate. However, many users think the modules are not challenging enough and are too brief.

Conclusions: Health sciences librarians can have an influence on the continuing education of primary care physicians. Responding to feedback is an important way to meet the learning needs of our users and improve the online learning service.

2:45 p.m.

The impact of online training on information-retrieval skills and clinical decision making in a family medicine clerkship

Katherine Schilling, AHIP, head, Information Management Education; **David S. Ginn, AHIP,** director; and **Joseph J. Harzbecker Jr., AHIP,** head, Reference and Interlibrary Loan; Alumni Medical Library; and **John M. Wiecha,** assistant professor, Medicine, Department of Family Medicine; Boston Medical Center, Boston, MA

Objectives: We designed an online, family medicine clerkship to use electronic technology to promote core physician values and to improve students' MEDLINE searching skills and competence in disease management and the practice of evidence-based medicine (EBM).

Methods: Double-blinded randomized controlled trial. Between 2000 and 2003, 150 third-year medical students enrolled in an elective, six-week family medicine clinical clerkship were randomly assigned to one of two experimental groups: (1) the control group, which received clinical instruction without supplemental online instruction, and (2) the intervention group, which participated in an online clerkship that included both clinical and online instruction. Data from pre- and post-intervention self-assessment surveys and MEDLINE literature searching scores were tabulated to assess the short- and long-term development of students' MEDLINE searching skills, disease management skills, evidence-based practice, and several measures of humanism.

Results: MEDLINE searches directly linked to simulated patient cases were electronically captured, blinded, and independently evaluated and scored by three reference librarians, allowing for a comprehensive analysis of students' searching skills. Data analysis indicated statistically significant differences between the searching scores of control and intervention groups, with intervention group (online clerkship) participants consistently performing more effective MEDLINE searches ($P < 0.0001$). Long-term analysis of students' MEDLINE searches showed that intervention group students conducted significantly more MEDLINE searches during a one-year period immediately following the clerkship than did their control group counterparts ($P < 0.0001$). Intervention group students also outperformed control group participants ($P = 0.005$) in EBM exercises requiring them to identify and apply randomized controlled trials to the care of a diabetes patient. Post-clerkship survey data indicated that intervention group students considered themselves to be more highly skilled than control group students in several key areas including their abilities to search MEDLINE effectively, identify gold standard journal literature, and practice EBM.

Conclusions: This study provides information on how online learning affects learners' acquisition and use of information-literacy and clinical skills. The electronic learning model for integrated online curricula is flexible, addresses challenges in medical education, and may be broadly applicable to a variety of medical clerkships and other health care education programs.

3:05 p.m.

Distributed power, distributed learning: strategies for providing online education for public health professionals in the digital age

Nancy J. Allee, AHIP, director; **Helen Look,** collection management coordinator; and **Deborah Lauseng,** administrative associate, and **Gillian Mayman,** head, Reference and Instruction; Public Health Informatics Services and Access, University of Michigan–Ann Arbor

Objective: The Michigan Informatics (MI-INFO): Development of a Model Curriculum for Public Health Professionals Project provides a series of information and computer literacy online training modules to give public health professionals the skills for effectively finding, evaluating, and using information in the digital library environment. It is a collaborative effort between an academic health sciences library and the Michigan Public Health Training Center, a Health Resources and Services Administration–funded site, and it is funded through a subcontract with the National Network of Libraries of Medicine, Greater Midwest Region.

Methods: This case study featured the development of Web-based training modules for public health professionals based on needs assessments and onsite training experiences with a large urban, a mid-sized urban, and a rural district public health department in the state of Michigan.

Results: Twelve training modules will be developed using state-of-the-art software and video production equipment. The course materials represent a rich variety of digital resources, including narrated PowerPoint presentations, Web tutorials, online bibliographies, and other supplemental resources. Built-in evaluative tools will be used to determine the effectiveness of the Web modules in increasing the participants' computer literacy and Internet research skills. In addition, statistics on the Web-based learning modules will be used to determine both the level of the use and the utility to the target audience. Ultimately, the training project is designed to yield a model public health informatics curriculum available globally via the Internet.

Conclusions: Web-based resources are an important addition to training initiatives and curriculum support for the public health workforce.

History of the Health Sciences and Nursing and Allied Health Resources Sections

The Power of Leadership

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Invited Speaker Session

2:05 p.m.

Leadership and public health in the South: the case of Joseph Goldberger and pellagra

Michael Flannery, associate director, Historical Collections, Lister Hill Library, University of Alabama–Birmingham

Historically pellagra was endemic to the American South. Casimir Funk, renowned pioneer in nutritional science and coiner of the term "vitamin," estimated that in 1915 there were some 165,000 cases of pellagra, nearly 11,000 of which proved fatal. Today, this debilitating killer is virtually unknown among practitioners in even the poorest regions of the American South. What happened and how pellagra was conquered is a story of personal leadership on the public health front with Joseph Goldberger taking the lead in a campaign that would ultimately see Conrad Elvehjam isolate and identify niacin as the key pellagra-preventing factor in the 1930s. By 1945, pellagra had been eradicated from the South. Far from a vague faceless process of incremental discovery, the victory over pellagra was one of personal, dynamic leadership.

2:25 p.m.

The militant angel: Annie Goodrich and army nursing

Stephen Greenberg, coordinator, Public Services, History of Medicine Division, National Library of Medicine, Bethesda, MD

Anna Warburton Goodrich (1866–1954) was the irresistible force in the history of American military nursing. She is remembered as a pioneer practitioner, educator, and social activist, but perhaps most famously, as the nurse who brought the highest professional standards to the US Army Nursing Corps during the First World War in her role as chief inspecting nurse of all US Army hospitals in France and The United States and later founding dean of the first US Army School of Nursing. This paper will focus on Goodrich's leadership role during the war years, drawing upon her own writings and those of her colleagues.

2:45 p.m.

The "girl" in white?: the real Dr. Barringer

Patricia Gallagher, AHIP, special projects coordinator, Library, New York Academy of Medicine–New York

In 1952, a film rendition of Dr. Emily Dunning Barringer's autobiography was released to the public. Like Dr. Barringer herself, the film was unusual; it dealt with the notion of an emancipated woman, a professional woman, and a woman who would choose to have a career as norm, rather than as an anomaly. This paper will examine the life of Dr. Barringer, both through the film and through her autobiography, and will examine media for her day for their response to her presence in the medical community.

3:05 p.m.

A curious mind

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

Leadership has many facets. No one characteristic makes the leader. One librarian leader has described herself in a way that also describes leadership. She gives this picture of herself—"native intellectual curiosity and a critical and analytic cast of mind that is keyed toward trying to find solutions." And find them she did, for Nina W. Matheson, AHIP, FMLA, tackled and solved many library problems. One of her solutions came from a major effort, the Matheson-Cooper Report. Development of the Integrated Academic Information Management System (IAIMS) concept changed both the way libraries managed information and the place and role of the library within the institution. Producing IAIMS was the result

of her curiosity, her desire to solve problems, and her visionary ideas. She is a leader in every sense of the word.

Hospital Libraries and Leadership and Management Sections

Power Rangers: Plugging into the Power

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Contributed Paper Session

2:05 p.m.

Hospital medical libraries: "to be or not to be"

Robert T. Neumeyer, coordinator, PMHS Libraries and Archives, Pittsburgh Mercy Health System, Pittsburgh, PA

Objective: To describe how the Brady Library embraced these challenges, added quality services, and value to its organization.

Methods: Case study.

Results: Library and computer skills training via grant funding is now conducted in the library. We have networked and shared department resources with our Information Services department to secure computers for training lab. Our library computer training lab is now used by numerous departments in the hospital for training. We recruited local colleges and universities to initiate a student work force via work-study/ internships. We currently have on board five colleges supplying students for little or no cost. We have developed a partnership with the hospital foundation for a grant-searching database. Our library has secured Smartboard technology via an education grant through the hospitals school of nursing. This technology is shared with many hospital departments. We developed a working relationship with the hospital volunteer services department. Through this relationship, we recruited college sororities to volunteer for hospital events. Sororities are required to provide community services, so we found it a perfect match. Our expansion of library services has not only benefited our library users but has allowed us to network favorably with departments through our hospital system. Most of these department employees have never previously been in the library, but our interdepartmental training, library users computer training, and project collaboration has showcased the value of our services.

Conclusions: All of these initiatives have brought the spotlight on our library as the model for customer service and department collaboration.

2:25 p.m.

The power of MOOMBA

Catherine M. Boss, AHIP, coordinator, Library Services, Booker Health Sciences Library, Jersey Shore University Medical Center, Neptune, NJ

Objective: To report on the library's involvement with the My Only Obstacle Must Be Attitude (MOOMBA) Committee and how that involvement was the source of power for the library's involvement with some major administration/human resources initiatives.

Methods: Case study.Setting/Participants/Resources: The library serves a 502-bed regional medical center with 3,500 employees and has a staff complement of 3.0 full-time equivalents. MOOMBA is an acronym for My Only Obstacle Must Be Attitude. The MOOMBA Committee is charged with administering the medical center's employee awards and recognition program. In addition to this charge, the committee organizes and runs fun events for employees, such as a goatee growing contest, multimedia swap or pumpkin decorating. The coordinator of library services began participating in the MOOMBA committee in January of 2003, attending the monthly meetings, manning the MOOMBA table for different events and serving as a judge for its contests.

Results: MOOMBA Committee activities have helped to foster a positive attitude amongst employees. Participation on the committee helped plug the library into the medical center's power source and helped market the library's services in new ways. The library was asked to be a key player in the employee's benefits open enrollment 2004 and in the 2003 Gallup Employee Opinion Survey. These initiatives contributed to a 20% increase in utilization of library services by hospital employees.

Conclusions: Participation on the MOOMBA Committee has provided the power for our library's growth and viability within the medical center, making it a library for the twenty-first century.

2:45 p.m.

Tailoring information to individual needs: using systematic search tools to provide the right information at the right time in the right way

Michelle M. Arbuckle, librarian, and **Audrey Friedman,** director, Patient Education; **Joyce Nyhof-Young,** education researcher, Education; and **Pamela Catton,** director, Oncology Education; Princess Margaret Hospital, Toronto, ON, Canada

Objective: The Patient and Family Library provides users with comprehensive cancer information through a collection of print and multimedia materials. Due to the fact that many patients need specific information beyond the scope of the traditional collection, a tailored search strategy was designed to guide volunteer staff through the complex information search process and to ensure that patients receive quality information in a timely manner.

Methods: An Information Search Request Form (SRF) was created in order to simplify the search process for paraprofessionals and volunteers. The form ensures that they capture primary and secondary diagnosis and treatment information as well as the patient's specific questions and preferred learning formats. The volunteers then follow detailed steps to create a tailored search that is vetted by the librarian before release. SRFs were tracked for nine months and each query assigned a subject heading. During this time qualitative volunteer feedback about the SRF procedure was gathered through conversations with patient education staff.

Results: 180 SRFs were completed in the time period noted. The top 5 requested subjects were: Site specific questions (37%), therapy (29%), drug specific (10%), psychosocial issues (10%), and nutrition (5%). Site specific questions focused primarily on malignant hematology (22%) and therapy questions were led by inquiries relating to surgery (23%).

Volunteers gave useful feedback on the form's layout and about information they felt was not being captured.

Conclusions: We are encouraged by preliminary findings and anticipate this tool will enhance our tailored search service. Volunteers initially resisted yet another paper-based task, however after they learned the importance and value of this patient service, and the simplicity of the process, we find that compliance is no longer an issue. An electronic version of the SRF is now available to patients on the University Health Network Internet site (www.uhn.ca) and evaluation of this new electronic resource is ongoing.

3:05 p.m.

Kidding around: integrating the library into pediatrics morning report

Elizabeth M. Smigielski, coordinator, Library Marketing, and **James E. Manasco,** coordinator, Liaison Activities, Kornhauser Health Sciences Library; and **Erin M. Richey,** Doctor Richard S. Wolf lecturer and chief resident, and **Tracee L. Wojtkowski,** Doctor Richard S. Wolf lecturer and chief resident, Department of Pediatrics; University of Louisville, Louisville, KY

Objective: To determine if integrating librarian-mediated searches into morning report improves medical student, resident, and faculty knowledge and use of Ovid MEDLINE and informs librarians of these users' needs and search practices. To illustrate our role, we will reenact an abbreviated morning report case, then follow with analysis of outcomes and discussion.

Methods: Since January 2002, librarians have attended morning report in the Department of Community and Family Medicine. Success there led to the recent invitation to participate in the Pediatrics Department morning report in August 2003. Residents, faculty, and medical students attend morning report daily. Librarians attend twice a week and incorporate instruction on search strategies and efficient use of Ovid MEDLINE and other resources, particularly online journals. During morning report, residents present a case, in minimal detail, and reveal more detail as the differential diagnosis of the patient's condition emerges. The entire group is actively engaged. During this process, a librarian searches Ovid MEDLINE via a laptop and Internet connection. The report concludes with a presentation of the search, including search technique, refinement strategies, discussion of the results, and pointers on accessing articles. Articles of interest are provided when appropriate. Issues to be addressed in the presentation include: challenges and considerations working in a practical teaching environment, searching methods, teaching strategies, information literacy skills assessment and outcomes, and broader benefits of the library resulting from this project.

Results: Initial evaluation reveals marked unfamiliarity with library information resources and reliance on Google and other generalized information tools. Follow-up evaluation shows considerable improvement in information literacy skills. Measuring the library's perceived value is difficult; however, anecdotal evidence suggests improved relations and communication between the clinical and library communities. Further evaluation will be done and the data will be quantified for the presentation.

Conclusions: This ongoing project has and will continue to improve participants' information literacy skills. This leads to improvements in patient care and our understanding of the information needs and skills of students, residents, and attending physicians, further reinforcement of the library's presence in the hospital, and improving the value of the library to students, residents, and faculty.

Medical Library Education Section

Emerging Ideas: The Power of Fresh Perspectives

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Contributed Paper Session

2:05 p.m.

The provision of consumer health information in Rhode Island: a comprehensive multi-type library survey

Jametoria L. Burton, reference librarian, Research and Information Services, University of Iowa–Iowa City

Objective: To measure the following information: (a) provision of consumer health information services to the general public, (b) comparison data by type of library type, (c) level of accessibility of consumer health information (CHI) to public patrons; and (d) future CHI training needs of public librarians.

Methods: Public librarians have been at the forefront of providing consumer health information to the general public in comparison to hospital and medical libraries although this trend may be changing. The first of its kind for the state, this paper reports the results of a comparative survey assessing the provision of CHI by Rhode Island's public, hospital, and academic health sciences libraries. In spring 2002, hospital, academic health sciences, and public libraries in Rhode Island were surveyed in a comparative study as a means of collecting the data. Out of 99 libraries 55 responded yielding a 57% response rate: 7 hospital libraries, 9 academic health science libraries, and 39 public libraries. The 34-question survey instrument utilized was based on a similar assessment tool developed and used by Sue Hollander in her study, "Providing Health Information to the General Public: A Survey of Current Practices in Academic Health Sciences Libraries". Topics included level of access, reference services, online searching, collections, and information literacy.

Results: The study revealed public libraries provided the highest level of access, followed by hospital libraries, and, lastly, academic heath science libraries. Clearly, public libraries serve on the forefront of this emerging issue. Results also reveal how participating libraries see their role in the larger scheme of service provision, patron utilization, and staff training, in comparison to other libraries within the state while serving as a benchmark to the role Rhode Island libraries play in the provision of consumer health information.

Conclusions: As emphasis on the provision of consumer health information in Rhode Island continues to grow, new opportunities for partnerships and cooperation increase between library types. This trend has the possibility of taking a more formal turn by providing formalized training opportunities for public librarians offered through regional

medical libraries, eventually leading to increased levels of service to the larger community.

2:25 p.m.

Women's use of the Internet for health information: the impact of selected demographic and health variables

Mary L. Klem, trainee, Health Sciences Library System; **Ellen G. Detlefsen,** associate professor, School of Information Sciences; and **Marsha D. Marcus,** professor, Western Psychiatric Institute and Clinic; University of Pittsburgh, Pittsburgh, PA

Objective: While consumers' use of the Internet to find health information has been well documented, details of their information-seeking behaviors are less well known. This study examines, in a group of women, types of health information sought, types of Websites used to obtain information, and perceptions of the quality of information found.

Methods: After 1 year of participation in a clinical trial of treatments for prevention of weight gain, 182 women completed surveys on health information-seeking behaviors.

Results: Average age was 35.5 years, 65% held a college or graduate degree, and 90% were employed. Eighty-seven percent were Caucasian, 9.7% African-American, and 3.25% either Asian, Native American, or Hispanic. At time of survey, 19 % were at increased risk of becoming obese, while 81% were maintaining healthy weights. At baseline and one-year follow up, there were no differences between treatment groups on demographic and weight variables. Overall, 86.6% have a computer at home, and 94% have access to the Internet. The top 3 resources used to find health information were books or magazines (73.9%), Internet (69.9%), and family members or friends (67.9%). The topics of searches were most likely to be nutrition or physical activity (80.6%), weight control (68.3%), a prescription drug (31.7%), and alternative medicine (30.1%). Women who had used the Internet in the past year to search for health information described such information as easy to find (37.5%) and easy to understand (49.2%) but only somewhat helpful (39.8%) and somewhat trustworthy (43.8%). Websites considered trustworthy by a majority were those maintained by hospitals or medical centers (85.3%), recommended by personal physician (75.4%), and university based (62.8%). Pharmaceutical company Websites were least likely to be considered trustworthy (37%). Demographic and weight variables had little effect on Internet access, search behaviors, search topics, or quality ratings of Websites.

Conclusions: Internet access was widespread and the Internet was one of the most popular sources for health information. However, the information found was viewed as only somewhat helpful and trustworthy. The identity of a Website's author or owner may be one factor women use to assess the quality of Web-based health information.

2:45 p.m.

Empowerment through collaboration in the classroom

Denise H. Britigan, reference librarian and education coordinator, Hardin Library for the Health Sciences; **Jeffrey C. Reist,** clinical instructor and coordinator, Pharmacy Practice Lab, College of Pharmacy; and **Vicki R. Kee,** assistant professor, Clinical, and staff pharmacist, Academic Research, Division of Drug Information Service; University of Iowa–Iowa City

Objective: To assess the effect on first-year pharmacy students' understanding of pharmacy resources and their skills in using them by the integration of a health sciences librarian into the design and teaching of the "Pharmacy Practice Lab" (PPL I) curriculum.

Methods: Cohort study: The setting is the College of Pharmacy, which is served by an academic health sciences library. The population consists of 107 first-year pharmacy students enrolled in PPL I, a required course. The intervention is the addition of an academic health sciences librarian to the team of instructors for the drug information component of PPL I. The librarian will collaborate in curriculum development, will teach in both lecture and lab settings, and will serve as a contact for the students when they are in the library. Results of student performance from the previous year's assignments, quizzes, and exams (pre-intervention) will be compared to the current year's performance results (post-intervention). Usage statistics for pharmacy electronic resources that are featured in the classroom will be compared from the previous year to the current year. Student evaluations of the drug information component will be compared from last year to the current year.

Results: Integration of a health sciences librarian into the design and teaching of the PPL I curriculum resulted in: (1) increased usage of electronic drug information sources, (2) improved assignment, quiz, and exam scores, and (3) positive feedback on the student evaluation assessment of the classroom environment. The usage statistics for one electronic drug information source alone showed a 100-fold increase. Although assignments were not all duplicated this year, the grades pertaining to the concepts of the material were improved. Student evaluations of the drug information instruction team for PPL I continued to be high.

Conclusions: Integration of a health sciences librarian into the design and teaching of the PPL I curriculum showed a positive impact on the usage of drug information resources, on the student's scores, on the interaction between the instruction team and the students, and on the classroom environment overall.

3:05 p.m.

Use of digital video technology to deliver digital reference: toward a video reference model

Susan Lessick, head, and **James E. Crooks,** medical librarian, Grunigen Medical Library, University of California–Irvine Medical Center, Orange, CA, and **Judy Ruttenberg,** research librarian, Langson Library, and **Heather Tunender,** electronic reference services librarian, Science Library, University of California–Irvine

Objectives: To report on a pilot project that evaluated the use digital video technology to deliver digital reference service to remote users and to demonstrate how this pilot project measured user satisfaction and analyzed librarian feedback to successfully achieve its goals.

Setting/Resources: Health sciences librarians used digital video equipment in combination with web-contact-center

software and high-speed network connections to conduct live video reference transactions between two libraries located thirteen miles apart.

Methods: Program evaluation: Video-enhanced digital reference service was provided to remote users for two weeks in the summer of 2003. Thirty-four users were recruited through advertising and incentives. After each transaction, users completed a modified PaSS questionnaire. Librarians also recorded their feedback in an online diary. Thirty user surveys were received for a response rate of 88%. Twenty-one librarian diary entries were analyzed.

Results: All survey respondents said the virtual librarian was quick to understand their questions, and 90% thought it was very easy to understand the librarian's answers. All respondents said the librarian was friendly, helpful, and prompt in answering their questions, and 77 % said they were very satisfied with the virtual reference experience. Even though a majority of respondents used search engines most often, 83% said they plan to use the service at least 50% of the time to answer future questions. An analysis of individual user comments also confirmed that the users were very pleased with the pilot service. Librarians were enthusiastic, with most recorded problems emanating from the use of our Web-contact-center software, and the overall complexity of the combined technologies. Out of 21 librarian diary entries, 8 specifically noted the benefits of video/audio enhancements to the transaction.

Conclusions: Video-enhanced digital reference service may be a useful tool for providing remote reference support to users at distant library locations. With the continuing need to deliver quality, timely, and cost-effective information services over the Web, these findings may help librarians deploy a video reference model as an effective and efficient reference delivery method. This model maximizes scarce resources and expands hours of service at branch locations, while increasing user access to subject specialists.

National Program Committee

Building and Maintaining Professional Power Tools: Architecture, Analysis, and Assessment

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Contributed Paper Session

2:05 p.m.

The power of partnership: NC Health Info and lessons learned as the MedlinePlus "Go Local" prototype

Christie C. Silbajoris, AHIP, project director; **Brian Hilligoss,** systems development librarian; **Rachel A. Wilfert,** community outreach librarian; and **Diana McDuffee,** director, North Carolina Area Health Education Center Library and Information Services Network; Health Sciences Library, University of North Carolina–Chapel Hill

Objective: This paper examines the key questions that other states interested in starting a "Go Local" project with MedlinePlus should consider.

Methods: NC Health Info, funded through a subcontract with the National Library of Medicine (NLM), is a Web-based database of local health services Websites directly linked to MedlinePlus health topics. NC Health Info was developed by the Health Sciences Library and the School of Information and Library Science at the University of North Carolina–Chapel Hill in collaboration with NLM. NC Health Info is one model for other states to follow in the provision of local health services information. This paper describes the challenges encountered, lessons learned, and best practices developed during the creation of our database structure, cataloging and administrative systems, and user interface. Topics addressed include infrastructure requirements, determination of scope and selection, vocabulary creation and pairing with MedlinePlus health topics, traffic issues, input and administrative system design, cataloging methodology and training, promotion and outreach, record maintenance, and the unique interoperability that enables the seamless linking of the two sites.

Results: The partnership formed between Health Sciences Library, School of Information and Library Science and NLM resulted in the creation of NC Health Info, the first prototype "Go Local" companion Website to MedlinePlus. NC Health Info has been successfully implemented, and NLM is replicating the model for other states to follow.

Conclusions: We are monitoring user satisfaction through usability testing and user surveys. Some specific measurements include the conceptual understanding of our homepage, effectiveness of navigation, understanding of terminology, and effectiveness of cataloging. In addition, we have received favorable comments from users, health care practitioners, and librarians concerning the value of the provision of local health services information linked to MedlinePlus, the user interface, and the project's ability to help local organizations promote their services. We are tracking the number of Websites linking to NC Health Info and are analyzing Web traffic logs to uncover patterns in the usage of the site.

2:25 p.m.

Indexing consistency in MEDLINE

James Marcetich, head, and **Marina Rappoport,** unit head, Index Section; and **Sheldon Kotzin,** chief; Bibliographic Services Division, National Library of Medicine, Bethesda, MD

Objective: Indexing for MEDLINE is performed by about 30 NLM staff members, 80 contractors, and staff at four international centers. In 2003, nearly 540,000 journal articles were indexed for MEDLINE. The consistency of indexing has implications for users' ability to retrieve information; a formal study of the consistency of indexing for MEDLINE will be undertaken.

Methods: The consistency study will involve indexing of approximately 500 articles from randomly selected journals, each to be repeatedly and consecutively indexed by 4 different indexers. Indexers will not know which journals are involved in the study. When indexing for each journal is completed, the indexed terms applied to each article will be copied into a study database. The final study database will thus consist of 4 versions of indexing for about 500 articles. The consistency of indexing will then be examined: the overall consistency, as well as the consistency of IM terms, NIM terms, check tags, publication types, and subheadings. Since MeSH is organized

into 15 broad subject categories (e.g., Anatomy, Organisms, Diseases, etc.), differences in the consistency of indexing for terms from each category will be examined. An attempt will be made to characterize those articles, journals, and broad subject areas that were indexed with the highest consistency, and those that were indexed with the least consistency.

Results: Check tags and publication types were indexed with relatively high consistency. IM terms (representing the major point of an article and denoted by an asterisk) were indexed more consistently than NIM terms. Subheadings were indexed with relatively lower consistency. Differences were found in the consistency of indexing with terms from separate MeSH tree categories.

Conclusions: MEDLINE indexing may be as consistent as it is practically possible for it to be. However, NLM will explore methods to enhance the consistency of indexing for MEDLINE and perform measures of consistency again in the future.

2:45 p.m.

To empower thy users, know thy users: analysis of email correspondence to ClinicalTrials.gov

Janet Heekin, AHIP, systems librarian, Lister Hill National Center for Biomedical Communications, National Library of Medicine, Bethesda, MD

Objective: As the host organization for ClinicalTrials.gov, a clinical trials registry, the National Library of Medicine (NLM) is responsible for providing accurate and updated information to users who are seeking information on clinical research studies—information that will ultimately inform their health decisions. This paper presents the results of an analysis of email correspondence regarding ClinicalTrial.gov. The main objective of the analysis was to identify health information needs and trends that may lead to implementing new information services for users of ClinicalTrials.gov.

Methods: An analysis of email correspondence regarding ClinicalTrials.gov received between October 2002 and September 2003 was undertaken in November 2003. This analysis was conducted on a report generated from the NLM Customer Service management system. To ensure confidentiality of the correspondents, all references to the identity of users were removed from the data prior to analysis.

Results: A total of 1,043 phone calls, emails, and postal mail were received by the NLM Customer Service; and analysis was conducted on 399 email messages. The majority of messages were requests for trial information: specifically, 108 (27%) by condition or intervention, 28 (7%) by a known trial, 28 (7%) by location, and 10 (3%) by trial sponsor or investigator. Forty-six (12%) correspondents requested information on how to apply for a trial; 45 (11%) on how to submit trials for listing in the ClinicalTrials.gov database; and 29 (7%) on how to find the study results. Also noted were correspondents' perceptions about the purpose of ClinicalTrials.gov, as well as the audience type of users, e.g., researchers interested in conducting research on the ClinicalTrials.gov database, and users seeking information on behalf of an ill family member.

Conclusions: This study demonstrates the importance of conducting analysis of user correspondence in conjunction with other evaluation methods in order to identify and implement new information services for users. Correspondence analysis specifically provides feedback from users, who in their own words help the site developers to better understand their unique information needs and improve the experience for users on the site.

3:05 p.m.

Information power to public health professionals

Hope Barton, assistant director, Information Resources; **Jim Duncan,** assistant director, Technology Services**; Jean Williams Sayre, AHIP,** director; **Scott Fiddelke,** digital media project manager; and **Linda Roth,** Web producer; Hardin Library for the Health Sciences, University of Iowa–Iowa City

Objective: What information do state and local public health professionals need quick access to? The overwhelming response from key public health players and groups in Iowa was "one-stop shopping" on the Web for state and local information along with selective national and international resources that relate to Iowa's public health issues.

Methods: The Hardin Library was awarded an NN/LM, Greater Midwest Region, subcontract to develop a public health Website that could serve as a model for other states in providing information targeted to the needs of the state's public health community. Library staff conducted focus group sessions and met with relevant organizations and individuals to determine types of information and search functionality needed by public health professionals in Iowa. The project's content team identified 2,200+ links from the user input including: state and local statistical/demographic data, county public health information, organizations, rules/regulations, grants/grant writing tools, news and hot topics, and more. The project's technology team developed a database-backed site that is graphically clean, easy to use, and quick loading. The site has advanced search capabilities that are granular and scalable and the content is indexed for Google and other search engines. Both the database framework and the programming for Iowa Public Health Information's back-end records management functionality will be offered as open-source resources to the health sciences library community.

Pharmacy and Drug Information Section

The 2004 EMBASE.com Lecture

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Invited Speaker Session

Sponsored by Elsevier.

2:00 p.m.

Drug regulation in the United States

Carol Cavanaugh, director, Division of Library and Information Services, US Food and Drug Administration, Rockville, MD

Public Health/Health Administration Section and African American Medical Librarians Alliance SIG

Mining Data for Knowledge Generation: Collecting, Using, and Promoting Data Sets

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Invited and Contributed Paper Session

2:05 p.m.

Geographically discrete data: mining the Internet to find authoritative health data

Helena VonVille, library director, Library, School of Public Health, University of Texas Health Science Center–Houston

Objective: To aid researchers, librarians, and public health practitioners who need health statistics for the state of Texas by creating a Web-based clearinghouse of health-related data that provide geographically discreet data, i.e. local information down to the county, city, or census tract level.

Methods: Librarians are often asked for data for communities, counties, or by zip code. The data exist but are typically distributed throughout multiple Websites. To simplify the process of finding health data, a Website was created for this project; resources were evaluated for inclusion by the following criteria:

1. Did the source provide data that were specific to a county, city or metropolitan statistical area (MSA)? In other words, were the data geographically discrete?
2. Was the source reputable or authoritative? In many cases, the sites were developed at the federal or state level. In other cases, the data have been massaged in some way and repackaged, either using GIS or through hard coding Web pages.
3. Was the site stable? Did it show signs of longevity?
4. Was the site actively updated and maintained? Or were the data no longer useful as they were out of date and available elsewhere?

Each site has been mined to find the relevant links to specific reports; individual reports are listed on the clearinghouse pages rather than just linking to the broader agency that provides the data.

Results: The clearinghouse currently consists of ten broad topics as well as a glossary and links to additional sources. The project has been well received; the Website was recently selected to serve as the health data clearinghouse for Workgroup L of the Texas State Strategic Health Partnership, a statewide health collaborative that was convened to improve the health of Texas.

Conclusions: Librarians, researchers, and public health practitioners who have attended a health statistics class have found the site to be extremely useful.

2:25 p.m.

A data sets service in the library: overview and evaluation

Peggy Tahir, information services librarian, and **Min-Lin Fang,** information services librarian, The Library and Center for Knowledge Management, University of California–San Francisco

Purpose: This paper will describe the library's data sets service to campus public health professionals.

Brief Description: Public health professionals in the University of California–San Francisco require access to data sets for their investigations, publications, and teaching. The library conducted an initial data sets needs assessment in mid-2000; the outcome was the development of a data sets service for the campus. Because of the success of the assessment and program, the library received senior management approval to purchase a membership in the Inter-University Consortium for Political and Social Research (ICPSR). The initial membership required users to pay a fee and did not allow direct end-user access. Feedback from faculty influenced the library to change its membership to ICPSR*Direct*, which allows end users to access the data sets on their own without the fee structure previously imposed. Data sets use rose dramatically, and the library is currently beginning to track use patterns. Library staff is now developing a data sets evaluation survey to faculty that should be completed in spring 2004. We are also looking for ways to further promote the data sets service.

Evaluation Method: Reference staff is currently working to collect use data for analysis. We will also be looking at the evaluation survey results to find ways to improve and promote data sets use on campus.

2:45 p.m.

The future of public health vocabulary and public health data standards

Vivian Auld, senior specialist, Health Data Standards, National Information Center on Health Services Research and Healthcare Technology, National Library of Medicine, Bethesda, MD, and **Anna Orlova,** consulting executive director, Public Health Data Standards Consortium, Baltimore, MD

National efforts on building the health information infrastructure call for collaboration of various agencies and entities interested in public health information to protect the health of the US population. Public health is a field that encompasses an amalgam of science, action, research, policy, advocacy, and government. In addition to clinical data, environmental, sociocultural, and economic data are also needed to support the national health infostructure and to provide timely response to a public health threat. Standardization of public health data and developing controlled vocabulary for public health are critical to support this collaboration via data sharing and system integration in public health. The aims of this session are to (1) discuss needs for further developing public health vocabulary and data standards, (2) review the national and state perspectives for developing public health vocabulary, (3) discuss efforts to develop a reference terminology and information model for public health, and (4) identify entities and partners in developing public health vocabulary and data standards.

Relevant Issues, Federal Libraries, and Public Services Sections

Affronts to Library Liberty: Legal, Ethical, and Practical Responses

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Invited Speaker Session

2:00 p.m.

Affronts to library liberty: legal, ethical, and practical responses

Jessamyn West, outreach librarian, Rutland Free Library, Rutland, VT

Censorship is imposed by computer filters and the removal or alteration of health information from libraries, depositories, and Websites. Information is restricted by license clauses and copyright law modifications. From the Health Insurance Portability and Accountability Act (HIPAA) to the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT) Act, patron privacy is both protected and threatened. How can health sciences librarians defend patron rights and help patrons navigate the maze of laws and regulations affecting access to health information? Jessamyn West will give an overview of some of the problems and help librarians find practical solutions.

Research Section and Assessment and Benchmarking and Clinical Librarians and Evidence-Based Health Care SIGs

The Power of Evidence (Part 1): How Benchmarking Can Make Your Point

Sunday, May 23, 2004, 2:00 p.m.–3:30 p.m.

Invited and Contributed Paper Session

2:05 p.m.

Em(P)owering your institution through benchmarking: a mixed-model approach to assessment

Douglas J. Joubert, digital information librarian, Robert B. Greenblatt Library, Medical College of Georgia–Augusta

Objective: This paper has two primary objectives. To describe the process of aggregating and merging Association of Academic Health Sciences Libraries (AAHSL) data with 2002 LibQUAL+ data and to answer three analytical questions created by the AAHSL Task Force on Quality Assessment that relate both to user satisfaction and services provided by AAHSL libraries.

Methods: Random-effects and regression analysis: Thirty-five AAHSL libraries that participated in the 2002 LibQUAL+ survey define the current research group. Nested-effect analysis of variance was analyzed using a linear mixed model (LMM). Measures of association were evaluated using Pearson correlation coefficient, and a linear regression model was used to develop the prediction equation. Using these statistical tests, the primary researcher was able to answer questions about the effect of user demographics on perceived levels of satisfaction with library services. Specifically, the researcher investigated three hypotheses of interest: (1) that the size of library staff affects measures of overall satisfaction, (2) that the number of constituents influences measures of overall satisfaction, and (3) that the ratio of staff to constituents affects measures of overall satisfaction.

Results: Institutional mean overall satisfaction (IMOS) was computed from measures of overall satisfaction from question 3 (Section 5.6) of the 2002 LibQUAL+ Survey. FTE has no significant effect on mean overall satisfaction ($r = –0.031$, $P = 0.860$, N = 35). Number of constituents has a low but significant effect on mean overall satisfaction; correlation is significant at the 0.05 level ($r = –0.391$; $P = 0.027$; N = 32). Ratio of staff to constituents has a moderate and significant effect on mean overall satisfaction; correlation is significant at the 0.01 level ($r = –0.592$; $P = 0.0003$; N = 32).

Conclusions: From a demographic perspective, the 2002 LibQUAL+ survey represents the largest cross section of AAHSL libraries. This allowed the researcher to measure the strength of the relationship between measures of overall satisfaction and demographic data submitted by AAHSL institutions. However, before drawing conclusions about the larger population of academic health science centers, further analysis is needed to test regression hypotheses against the selected sample.

2:25 p.m.

Using outcome measures to assess the information-seeking behavior of clinicians after access to online resources: a longitudinal cohort study

Nancy H. Tannery, assistant director, Information Services; **Charles B. Wessel,** coordinator, Affiliated Hospital Services; and **Barbara A. Epstein, AHIP,** interim director; Health Sciences Library System; and **Cynthia S. Gadd,** assistant professor, Medicine, Center for Biomedical Informatics; University of Pittsburgh, Pittsburgh, PA

Objective: To evaluate the information-seeking behavior and practices of a clinical staff before and after access to online resources.

Methods: A longitudinal cohort study of the clinical staff at a 300+ bed hospital, located in rural Pennsylvania, that had contracted with the academic health sciences library for access to an extensive collection of online journals, textbooks, databases, and other knowledge-based information. The self-reflective surveys, sent at the initiation of online services and one year later, asked how clinicians locate and access relevant knowledge-based information to answer questions related to their teaching and patient care activities.

Results: In 2002, self-reflective surveys were sent to the hospital's 864 clinical staff during the initiation of online resources. The response rate was 47% (n = 407). One year later, a follow-up survey was sent to those who had returned the first survey. The return rate for the second survey was 58% (n = 236). A comparison of the results indicated that 25% of the clinical staff had begun to use the library's online resources on a weekly or monthly basis. The majority of them used the resources to read an article, locate drug information, or find information for a patient. The results also indicated that 25% of these users had canceled personal journal subscriptions and

50% consulted the medical literature more often. Clinical staff not accessing online resources, used colleagues, print textbooks, and journals to satisfy their information needs. A comparison of the clinical staff regularly accessing online resources with those that were not showed that those using the online resources also used colleagues, print textbooks, and journals to satisfy their information needs and used them more often than the clinical staff who did not use the online resources.

Conclusions: The study outcome suggests a behavior change in clinical staff that are early adapters to using online resources. They consult the literature more often to locate the answer to a particular problem or patient question or to stay current with the changes in medicine.

2:45 p.m.

Selecting the best book and journal titles for support of clinical dentistry: evidence-based decisions

Frank Mason, dental librarian, Wilson Dental Library, University of Southern California–Los Angeles

The MLA Dental Section revised its 1997 list of recommended books and journals in support of clinical dentistry. The list was developed by the Dental Section to assist librarians and other collection development officers in libraries supporting clinical dentistry programs (such as oral surgery hospital internships, oral health clinicians, or advanced dental education programs). This presentation will discuss the sources and evidence used to determine the best titles.

3:05 p.m.

Participant observation and grounded theory

Michelynn McKnight, AHIP, director, Health Sciences Library, Norman Regional Hospital, Norman, OK

Participant observation is a naturalistic method of gathering qualitative data from the behavior of real people in their normal environment. The investigator and the people work so closely together that they are all considered participants—not researcher and subjects. The investigator does not have to rely on the self-reported memories of surveys and focus groups but, immersed daily life, can experience what people really do. The researcher is free to discover unexpected behaviors that reveal not only what people do, but why they do it. This method is particularly appropriate in the study of information-seeking behavior.

Veterinary Medical Libraries Section and Vision Science SIG

The Power of Independence: Information for Owners of Service Animals

Sunday, May 23, 2:00 p.m.–3:30 p.m.

Invited and Contributed Paper Session

2:05 p.m.

Institutional policies for service animals in the era of the Americans with Disabilities Act

Judith Schaeffer Young, medical library director, Kelman Library, Wills Eye Hospital, Philadelphia, PA

Objective: To describe the presence of animals in the health care setting.

Methods: A random sample of individual hospital policies and procedures for animals was conducted. In a narrative review, the author describes the different categories of animals that appear in healthcare institutions, including guide dogs for the visually impaired, assistance canines for the disabled and hearing impaired, and pet therapy animals.

Results: In spite of the enactment of the Americans with Disabilities Act (ADA), hospital policies covering animals are extremely varied. Some are extremely detailed while others are one sentence placing responsibility for the animal on the owner. Some hospitals have no policy whatsoever.

Conclusion: The ADA has not brought about uniformity in the policies and procedures of health care institutions relating to service animals. The eye hospitals surveyed have much less detailed policies than acute care hospitals.

2:25 p.m.

Fidos for Freedom demonstration

John Dietrichs, Fidos for Freedom, Elkridge, MD

Fidos for Freedom, an assistance and therapy dog training organization in Laurel, MD, has been invited to give a presentation on disability awareness and the impact that assistance dogs have on the lives of physically challenged and hearing impaired individuals. Current clients, dogs, and volunteers will be part of the program.

Cancer Librarians, Relevant Issues, and Research Sections and Lesbian, Gay, Bisexual, and Transgendered Health Sciences Librarians SIG

Making Critical Decisions: End-of-Life Health Care

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited and Contributed Paper Session

3:35 p.m.

The means to a better end: collection development in the medical library to support compassionate end-of-life care

Susan A. Byars, librarian, Hospice Library, Hospice of the Bluegrass, Lexington, KY, and **Edwina (Winn) Theirl,** outreach coordinator, Chandler Medical Center Library, University of Kentucky–Lexington

Objective: To identify information resources to support professionals and their terminally ill patients when treatment goals change from curing disease to providing comfort and dignity at the end of life.

Methods: Case study: This presentation will: identify factors promoting change in the way we care for dying patients; describe the concept of palliative care; describe the hospice model as a framework for collection development in end-of-life care; review relevant MESH terms; and identify authoritative textbooks, journals, and Web-based materials appropriate for medical libraries.

Results: Although death is a universal experience, it continues to be a profoundly difficult topic for patients and professionals alike. In a *JAMA* article published in 2000, Rabow concluded that top-selling medical textbooks offered little helpful information for physicians caring for patients at the end of life, echoing the findings of a study of nursing literature by Ferrell published a year earlier. However, there have been significant changes in a few short years. Professionals and consumers alike are acknowledging the value of a palliative model that shifts treatment goals from effecting cure and/or prolonging life at any cost to promoting comfort and managing symptoms in order to achieve the best quality of life for patients with life-limiting illnesses.

Conclusions: Access to peer-reviewed literature is critical to clinicians providing quality care, but in the past little was published to support physicians and nurses caring for terminally ill patients. In recent years, the discipline of palliative medicine has evolved rapidly and there is wider recognition of the hospice concept as a legitimate model of care for dying people. As a result, there is an emerging body of quality literature on end-of-life care that should be included in all medical libraries.

3:55 p.m.

Introducing information resources to improve end-of-life care: a collaborative training effort

Susan A. Byars, librarian, Hospice Library, Hospice of the Bluegrass, Lexington, KY, and **Edwina (Winn) Theirl,** outreach coordinator, Chandler Medical Center Library, University of Kentucky–Lexington

Objective: To describe a successful year-long outreach and training collaboration in which the goal was to introduce the growing body of literature on end-of-life care and to provide Internet-based training in accessing resources that support compassionate care for terminally ill people.

Methods: Case study: Highlighting the challenges of providing outreach and training to multidisciplinary groups, we will: describe project publicity activities; introduce an extensive, indexed resource guide developed as a training hand-out; and discuss the flexible ninety-minute program designed to address the needs of participants who were interested in terminal care but who came from different professional backgrounds and arrived for training with differing computer skills.

Results: This project was funded by a training grant from the National Library of Medicine, Greater Midwest Region. During the course of the project, 175 health care professionals and hospice volunteers attended one of 14 training sessions offered in 10 different locations in Kentucky and more than 1,300 individuals were reached by project activities.

Conclusions: The training grant provided an unusual and very successful opportunity for collaboration between a university hospital library, the University of Kentucky's Chandler Medical Center Library, and Hospice of the Bluegrass, a community-based non-profit hospice organization. The training model as well as the resource guide developed for this project will be of interest to medical librarians serving health care professionals providing care to terminally ill patients as well as serving consumers seeking compassionate end of life care for themselves or loved ones.

4:15 p.m.

Making critical decisions: medical librarians and end-of-life health care

Nancy Boucot Cummings, senior biomedical advisor, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Washington, DC

Issues surrounding the end of life are ones that everyone must face but often are ones that people are loathe to discuss and to face. While death is part of the human condition, modern medicine has helped to extend the life span to such an extent that awareness of acute diseases, dying, and death are not a usual part of experience in high-income countries as they once were. Euphemisms are frequently used to allude to death and dying—a way of not facing their reality. Chronic disease is increasingly common and life-sustaining technologies prolong life, often without an ideal quality of life. In the last three decades, awareness of the need to deal with these issues, legal mechanisms such as advance directives (living wills, durable powers of attorney for health care), and the Patient Self-Determination Act have been developed to encourage persons to make their wishes known about potential end-of-life care. Studies of chronic disease and of the ethical issues at the end of life focus on problems to be faced. The treatment of end-stage renal disease (renal dialysis and transplantation) is a paradigm for end-of-life treatment and the ethical issues involved.

Chiropractic Libraries and Public Health/Health Administration Sections

Eco-Power: Taking Back the Environment

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited and Contributed Paper Session

3:35 p.m.

What's the environment got to do with our health?

Barbara Sattler, director, Environmental Health Education Center, School of Nursing, University of Maryland–Baltimore

The American public receives almost daily reminders of health threats posed by the environment: lead in drinking water creating risks to children's ability to learn and develop, mercury in some fish hindering normal fetal development, and arsenic in groundwater or in pressure-treated wood in decks and play equipment affecting the health of our children. These daily reminders often give us enough information to be concerned, but not enough to prevent or solve environmentally related problems, track and diagnose the associated illnesses, and appropriately treat, refer, and educate our patients, families, and communities. This session will review the basics of environmental health and describe the potential uses of various information sources in clinical and public health settings.

4:15 p.m.

A collaborative approach to introduce information professionals to bioterrorism issues and resources

Shari Clifton, head, Reference and Instructional Services; **Ursula Ellis,** reference librarian; and **Susan Sanders,** reference librarian; Robert M. Bird Health Sciences Library; **Daniel Boatright,** associate dean, College of Public Health; and **Clinton M. Thompson Jr.,** director, Robert M. Bird Health Sciences Library; University of Oklahoma Health Sciences Center–Oklahoma City

Objective: To report on the collaborative efforts of public health professionals and medical librarians to develop a course on bioterrorism issues and resources designed for information professionals in a variety of settings. The course emphasizes the librarian's role as a vital community resource on bioterrorism and prepares attendees to fulfill that role within their own communities.

Methods: Since September 11, 2001, numerous educational opportunities have been focused toward the needs of public health professionals and first responders. Recognizing that public, school, academic, and medical librarians are likely to be the first point of contact for professionals and consumers seeking ecoterrorism information within communities, the authors of this paper have developed a course 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 should a crisis occur. The content of the course includes an overview of bio/ecoterrorism issues and agents presented by a public health professional. In addition to providing relevant vocabulary this section of the course also "sets the stage" for attendees, giving them some context for the importance of the information resources introduced by the medical librarian in the remainder of the course.

Results: As a report on the collaborative development of a bio/ectoterrorism course, this paper initiates the process of alerting librarians to the potential in this area. In addition to highlighting the role that libraries should play in the preparedness of their local communities and preparing librarians to work with clinical and public health professionals who have expertise in bio/ecoterrorism, the paper also provides a model that other libraries can implement locally and establishes a forum through which colleagues with similar interests can begin to interact.

Conclusions: Librarians and other information specialists fill a key role in preparing communities to respond to disasters. Health librarians, especially, need to be prepared with background materials and training to meet the information needs that arise during a bio/ecoterrorism threat.

4:35 p.m.

Power to the people: health information and environmental justice

Gale Dutcher, head, Office of Outreach and Special Populations, Division of Specialized Information Services, National Library of Medicine, Bethesda, MD

The environmental justice movement took shape in the early 1980s, questioning inequities in the distribution of toxic waste sites that activists asserted were disproportionately located in minority and other low-income areas. In 1987, the United Church of Christ published a study, Toxic Waste and Race in the United States, calling attention to the association between hazardous waste facilities and the racial/socioeconomic composition of the communities hosting such facilities. The study reported that while economic status played an important role in the nationwide location of commercial hazardous waste facilities, the race of the residents proved to be a more significant determinate. The National Library of Medicine (NLM) was one of the organizations that cooperated in the Mississippi Delta Project initiated in 1990 by then Governor Clinton of Arkansas. Recognizing that information plays a critical role in community and individual health, NLM's role was to bring access, awareness, and training in the use of health information to those communities. Since that time, NLM has worked with historically black colleges and universities (HCBUs); local, state, and federal agencies; and community organizations to ensure access to needed information in environmental health. The NLM Environmental Health Information Outreach Program (ENHIOP) has as its mission to enhance the capacity of minority-serving academic institutions to reduce health disparities through the access, use, and delivery of environmental health information on their campuses and in their communities. Currently there are fourteen HBCUs, three tribal colleges, and three Hispanic serving institutions represented on the program panel. As with other health issues, community and faith-based organizations, such as Jesus People Against Pollution (Columbia, MS), may play a vital role in community improvement and problem resolution. They also require access to environmental health information as a critical tool in their efforts.

Collection Development and Pharmacy and Drug Information Sections and Molecular Biology and Genomics SIG

Building Your Power Base: Collection Development in Molecular Biology and Bioinformatics

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited Speaker Session

3:35 p.m.

Seize the power of bioinformatics: new strategies

David Osterbur, librarian, Biological Labs Library, Harvard University, Cambridge, MA

Bioinformatics, like many other areas of the life sciences, is a field that is rapidly expanding and changing. In a field where only the most current version of a software program is important, where there are many freely available programs on the Internet, where knowledge of content is important in evaluating the use of available resources, and where collection budgets are under extreme pressures, collection development librarians must adopt new strategies to meet their clients' needs. Two strategies that can be useful in this process are:

1. Taking advantage of open access to the journal literature.
2. Librarian education in molecular biology to develop the individual expertise of the research librarian to identify and use the sophisticated Web resources now available in bioinformatics.

Harvard's current progress on these strategies will be presented.

3:55 p.m.

Biological information resource

Mark Minie, bioresearch liaison, Health Sciences Libraries, University of Washington–Seattle

The hyper-exponential growth of biological data at the biomolecular, cellular, organismal, population, and ecosystem levels is driving the development of both new hardware and software for the storage, access, and analysis of biological information. It has also required the development of new approaches to meeting the informational needs of basic bioscience researchers in the library. The University of Washington Health Sciences Library (UW HSL) BioCommons, is an integral part of an evolving vision of a shared collection of computer services, bioinformatics software, telepresence/ collaboration tools, consulting, and training aimed at enhancing access and comprehension of the flood of new information produced by the new convergence of biological and computer sciences. The BioCommons, founded nearly ten years ago in response to the growth in molecular biology and bioinformatics is now evolving to meet researchers' needs in such new areas as structural and systems biology. The new tools and approaches in current use at the BioCommons and the long-term plans for this unique shared biological information resource in the UW HSL will be described and discussed, with supporting data and demonstrations presented.

4:15 p.m.

Selection of resources for the development of an information service program in molecular biology and genetics

Ansuman Chattopadhyay, information specialist, Molecular Biology, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

In the wake of the human and model organism genome projects, the explosion of genetic information has enabled the creation of numerous useful molecular biology databases, software, and Websites. These *in silico* resources provide enormous support in every step of the life sciences research process, from hypothesis generation to hypothesis testing at the laboratory workbench. It is challenging for individual biologists to stay current in this ever-increasing flow of information. Since 2002, the Health Sciences Library System at the University of Pittsburgh has offered a specialized information service program in molecular biology and genetics. The main features of this service are: (1) identification and licensing of relevant molecular biology software and online information resources, (2) education and training for bioinformatics resources, and (3) bioinformatics consultation service. This presentation will focus on the collection development in the field of molecular biology and genetics. Collections are categorized into major tasks including:

1. literature retrieval (CellSpace Knowledge Miner and other data mining software)
2. genetic and proteomic information retrieval (commercial and publicly available curated gene and protein catalogs, NCBI LocusLink, Incyte's Proteome BioKnowledge Library, SwissProt, etc.)
3. DNA-protein analysis tools (Informax Vector NTI suite and publicly available Web servers providing software for sequence analysis, genome analysis, 3D structure prediction, etc.)
4. laboratory work resources (Wiley Interscience Current Protocols online, Labvelocity's Research Link, etc.)

A comparative analysis of the task specific resources with cost, usability, and impact to the research community will be presented.

Consumer and Patient Health Information and Nursing and Allied Health Resources Sections and Mental Health SIG

The Power of Collaboration

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Contributed Paper Session

3:35 p.m.

The Health Sciences Library System consumer collection: a public/academic partnership for consumer health information

Deborah Silverman, assistant director, Resource Management; **Barbara A. Epstein, AHIP,** interim director; **Michelle Burda,** consumer health librarian; **Michele Klein-Fedyshin,** manager, Library Services, UPMC Shadyside; **Gretchen Maxeiner Millis,** cataloging and special projects librarian; and **Ester Saghafi,** reference librarian; Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: To report on a project to place consumer health collections in local public libraries. The goals of the project were to improve access to consumer health information in the community and to evaluate the usefulness of the Health Sciences Library System (HSLS) consumer collection by measuring use of specific books and videos.

Participants: The HSLS, University of Pittsburgh, offers consumer health materials in all of its libraries and operates the Hopwood Library: A Health Resource Center for Patients and Families. The Allegheny County Library Association is a nonprofit corporation to promote public libraries and improve library service to the residents of Allegheny County, Pennsylvania. YBP Library Services provides books and supporting collection management and technical services to academic, research and special libraries around the world.

Method: The growing interest in health information for consumers has led to new roles for both public librarians and health sciences librarians. In 2003, HSLS received a grant to enhance community-based consumer health information services in the county. Partnering with the local library organization and a national book vendor, consumer health information librarians developed a core list of consumer health materials from which local public librarians could build collections tailored to their communities' needs. The project then placed consumer health collections in the public libraries as cornerstones for the development of ongoing consumer health information services. HSLS will monitor use of the collections through user statistics to understand the differences in consumer health activity in a public library rather than a health care setting.

3:55 p.m.

A public-private partnership to improve the health-related information-seeking skills of mental health consumers and staff

Mary A. McKeon Blanchard, associate director, Library Services; **Keven Jeffery,** project librarian; and **David S. Ginn,** director; Alumni Medical Library, Boston University Medical Center, Boston, MA

Objective: The project provided the consumers and staff at an underserved in-patient psychiatric hospital with access to computers and computing resources, a quality-filtered Website, and skills training on locating and evaluating Web-based health information.

Methods: Project Description: Background: An academic health sciences library partnered with a state government mental health department to improve consumer and staff information-retrieval skills and access to information. This project, funded by a National Library of Medicine Information Systems Grant, included three primary objectives: (1) to purchase and strategically place 24 computers and 6 printers in 5 inpatient units and a transitional rehabilitation program, (2) to provide information skills workshops and ongoing information-seeking support to 125 mental health consumers and 200 staff, and (3) to develop and design a mental health/physical health information Website for use by consumers, paraprofessional and professional staff, family members, and the general public. This paper describes the planning and implementation of the first year of this 3-year project. Challenges included interagency communication, leadership changes, development of program policies and procedures, information technology security issues, workshop and meeting planning, and other issues inherent in partnering with a large state-run organization undergoing severe budget cuts and massive internal change including staff lay-offs and reassigned roles.

Results: The collaboration between Boston University Medical Center Library and the Commonwealth of Massachusetts, Department of Mental Health, has provided mental health consumers and staff access to computers, facilitated increased usage of information resources on the Web, and enhanced development of information skills.

Conclusions: The project demonstrates how a health sciences library can successfully collaborate with an organization differing significantly in structure and culture to provide needed resources, services, and education to an underserved population in an inpatient environment.

4:15 p.m.

Tribal college libraries: an opportunity for collaboration in bringing quality health information to Native Americans

Judith Rieke, assistant director and collection management librarian, Library of the Health Sciences, University of North Dakota–Grand Forks; **Quincee Baker,** director, Library, Fort Berthold Community College, New Town, ND; **Myrna DeMarce,** librarian, Valerie Merrick Memorial Library, Cankdeska Cikana Community College, Fort Totten, ND; **Tom Eggers,** director, Library, Turtle Mountain Community College, Belcourt, ND; **Mark Holman,** director, Library, Sitting Bull College, Fort Yates, ND; and **Charlene Weis,** director, Library, United Tribes Technical College, Bismarck, ND

Objective: To describe a collaboration between the staff at the University of North Dakota (UND) Library of the Health

Sciences and five tribal college librarians in North Dakota. This project was an "Access to Electronic Health Information for the Public" subcontract but resulted in a longer lasting network for providing quality electronic health information to North Dakota's American Indian population.

Methods: This case study examines how UND and the tribal college librarians worked together to accomplish four major objectives: train users, develop a Website to promote electronic health resources applicable for Native Americans, provide access to a full-text health database, and place computer workstations in the tribal college libraries.

Results: The four objectives of the subcontract were accomplished. Training: All five librarians and their staff attended two interactive video network sessions and one onsite training session at their college. College faculty also attended the on-site training. In addition, training was provided for users at powwows and a reservation wellness conference. A Website (harley.med.und.nodak.edu/tcl/) was developed, is maintained, and has been used over 3,600 times. Access for the tribal colleges was provided to the database Health & Wellness Resource Center for one year. Computers and printers were purchased and placed in the tribal college libraries. Surveys of users revealed an increased knowledge about PubMed and MedlinePlus. Most important was the reaction of the tribal college librarians to this project. A survey elicited their personal reactions and revealed that they all either strongly agreed or agreed that they enjoyed participating in the project. Most felt they had the opportunity to give input and felt part of the project. All strongly agreed or agreed that they felt more capable to identify, evaluate, and use health information on the Internet. Most felt they were better able to teach their users, and all either strongly agreed or agreed that the project helped users of their libraries.

Conclusion: This collaboration was accomplished through sensitivity to cultural issues and consistent personal contact. Listening to suggestions, being flexible in deadlines, and seeking advice from other Indian people proved helpful in accomplishing our objectives.

4:35 p.m.

From handouts to hard dollars: sustaining consumer health projects with collaboration and partnerships

Linda Phillips, project coordinator, CLIC-on-Health, and **Kathleen M. Miller,** executive director, Rochester Regional Library Council, Fairport, NY, and **Julia F. Sollenberger, AHIP,** director, Health Science Libraries and Technologies, University of Rochester Medical Center, Rochester, NY

Objective: Sustaining grant-funded consumer health projects for the long term is a looming issue for most of us who have received NLM dollars to transform our ideas into actions. How do we make the transition from soft to hard money? Where will the dollars come from, and how do we find them?

Methods: Case study: Local librarians (medical, public and school) have been engaged in a journey for the past four years to provide the people of this greater metropolitan area with the high-quality information they need to make wise lifestyle and health care choices. They have collaborated on the major components of the program: training, developing a Website specific to the local area, and evaluating the impact that the information has on the community's health. The planning team realized it must develop a business plan to ensure the future of this venture. What should the project look like in three to five years? What are the fixed and variable costs necessary to maintain and to grow into our project vision?

Results: Creating a shared vision is the foundation of our business plan development. We have determined the "basic" program elements that must be funded for continued existence—a half-time project coordinator, Website hosting and maintenance, ongoing training of public librarians, and marketing and public relations activities for "getting the word out" to our community. These must be sustained through ongoing revenue. A host of additional exciting and forward-looking activities could be funded. As we discuss the partnerships that could be forged and the groups that might benefit from our programs, funding ideas have emerged, ranging from approval for United Way funding to offering sponsorships to community businesses.

Conclusions: Though our long-term planning is still in early stages, we find that we must combine practical considerations with creative, pie-in-the-sky possibilities as we look to the future of our collaboration. Convincing others to believe in us, in our purpose, and in our vision will help us identify strategies and build partnerships.

Hospital Libraries Section

Thunder Claps and Lightning Bolts

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited Speaker Session

3:30 p.m.

The day that Comet died: the demise of paper and the rise of electronic document delivery in New Jersey: the Health Sciences Library Association of New Jersey solution

Robert Mackes, medical librarian, Schering-Plough Library of Science and Medicine, Union Hospital, Union, NJ; **Elaine Goldman,** medical librarian, Medical Library, Pascack Valley Hospital, Westwood, NJ; **Patricia Regenberg, AHIP,** manager, Health Sciences Library, Mountainside Hospital, Montclair, NJ; **Barbara Reich, AHIP,** director, Medical Library, Hackensack University Medical Center, Hackensack, NJ; and **Michele Volesko,** director, Library and Corporate Information Services, New Jersey Hospital Association–Princeton

Objective: To demonstrate that in crisis there is opportunity. To describe the Health Sciences Library Association of New Jersey (HSLANJ) member libraries' response to the crisis caused by the sudden termination of Comet, the courier service used for statewide interlibrary loan delivery. To show how HSLANJ's leadership overcame disaster and propelled the development of a statewide digital document delivery network for health sciences libraries.

Setting/Participants/Resources: A HSLANJ task force utilized the organization's email discussion list, Website, and meetings to survey members, assess needs and provide education. HSLANJ also partnered with several of New

Jersey's multitype Regional Library Cooperatives (RLC). Through subsidies provided by the RLCs, HSLANJ members were afforded the opportunity to purchase scanners to implement total electronic document delivery among members.

Brief Description: For many years, HSLANJ member libraries relied almost exclusively on a courier service funded by the New Jersey State Library Network for delivery of interlibrary loan materials. In April 2002, that courier service suddenly ceased to exist. Shortly thereafter, an Electronic Document Delivery (EDD) Task Force was formed to investigate the feasibility of total electronic delivery of interlibrary loans between HSLANJ members. Some of the challenges faced by the task force included technology, education and funding issues. The task force used various methods to assess the members' needs in these areas and to implement appropriate solutions. This paper will address the planning process and how HSLANJ guided the concerted efforts of health sciences librarians in New Jersey and initiated a change in interlibrary loan delivery methods.

Results/Outcome: A group purchase of scanners, subsidized by the three RLCs and coordinated jointly with HSLANJ, was offered to all HSLANJ members in the spring of 2003. By August 2003, forty-three HSLANJ member libraries began sending interlibrary loans electronically. Classes were conducted by one of the members of the Task Force along with a person from the National Network of Libraries of Medicine Middle Atlantic Region office to demonstrate how to use the scanner and other issues. Members of the task force are always available to answer questions.

Evaluation Methods: The membership will be surveyed again in early 2004; the results will be compared to the original survey and presented in this paper. The task force is also asking the membership to keep statistics of interlibrary loan methods used for the month of December 2003 along with any problems encountered.

4:15 p.m.

Finding the silver lining: what "crisis management" can teach us

Elaine Wells, library director, Kohn Vision Science Library, College of Optometry, State University of New York–New York

Purpose: This paper will outline the organizational opportunities uncovered by the disruption in our subscription service, steps taken to improve the journal management and collection development processes, benefits that came from having to start the process from scratch, and the use of this "crisis" as a management tool.

Setting/Participants/Resources: The Kohn Vision Science Library is a small academic health sciences library with a staff of five, including two professional librarians. The subscription management process had traditionally been handled by a paraprofessional with the assistance of a clerk. All journal tracking information was kept in a FileMaker Pro database individually customized by the staff subscription manager with little input from other department members. Faculty preferences for certain journals had not been measured for several years, and requests for additional journals were routinely turned down because of lack of funds. Electronic journals made up only a small part of our collection, since we thought most patrons preferred print.

Brief Description: The bankruptcy of our subscription company taught us "volumes" about our journal management process, uncovering areas for improvement and highlighting opportunities for positive procedural change. Benefits gained from weathering the crisis include better tools for analyzing our journal collection, improved information sharing practices among staff, and a positive perception of the library as responsive to patron needs.

Results/Outcome: All subscription information will be moved to a new system easily accessible by all staff. Journals not graced by publishers (and not missed by patrons) will be cancelled. Journals graced in electronic format will be maintained electronically, thereby saving space and costs. Most importantly, funds made available through cancellations will be used to purchase additional journals in electronic format identified through a patron user survey.

Evaluation Method: Since we are canceling some print journals and replacing them with electronic journals that are new to the collection, we will survey faculty and staff next year to determine usage and satisfaction with modifications to the collection. We will also involve relevant committees and councils (Committee on Learning Resources, Council on Information Technology) to determine impact of new content and access methods.

International Cooperation and Federal Libraries Sections

International Cooperation: The Power of Sister Libraries

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited and Contributed Paper Session

3:55 p.m.

Health library partnership programs: an overview

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

Objective: To discuss health-related library partnerships between institutions in industrialized countries and those in developing or transitional countries. These partnerships have the objective of assisting in bridging the health information divide between the "north" and the "south."

Methods: Comparative study: The paper contains information about the scope, longevity, institutional arrangements, and funding sources of these partnership projects. The means of communication, particularly electronic formats, are discussed. Also emphasized are the key factors for the success and failure of such projects. It will include a set of guidelines that fosters the success and sustainability of these programs.

Participants: The participants are libraries in industrialized and emerging countries that are involved in library partnership programs. The data is a compilation of a survey undertaken for the US National Library of Medicine in 1999–2000 and information compiled for the International Network for the Availability of Scientific Publications (INASP) Health Library

Partnership Database (www.inasp.info/health/librarypartners/). The initial project surveyed programs between twenty-four North American libraries and partners in developing and transitional countries. At the time of the study, sixteen of the industrialized country based libraries had ongoing projects. The "database" contains information on nineteen current projects between partners in North America and Europe and those in the less developed environment.

Results: In descending order, the key factors for success are email access, staff support, and interest from the partner, Web access, interlibrary loan activities, and staff training. The only significant failure factor noted is the availability of equipment. This parallels the respondents' "wish to add" list that includes permanent funding, Web access, and telecommunications hardware and software.

Conclusion: The paper is of value to individuals and institutions who are interested in developing library partnerships. It contains information on an ongoing project, the INASP Health Library Partnership Database and what has fostered success of these programs.

3:55 p.m.

The role of the sister library project in the development of the Medical Research Library of Latvia

Velta Poznaka, director, Medical Research Library of Latvia, Riga, Latvia

In 1999, Medical Research Library of Latvia was named as one of the two sister libraries of the Medical Library Association's International Cooperation Section. From 1999–April 2003, some of the major accomplishments of this program have been:

- Obtaining Ariel for the Latvian Library and soliciting free interlibrary loans from libraries in the United States and Canada.
- Establishing a plan for free shipments of books and journals from two central US cities to Latvia.
- Soliciting current and useful books and journals from US medical libraries.
- Soliciting support from library vendors including: MDConsult, STAT! Ref, UpToDate, EBSCO, and several others. Several Latvian American Associations have been involved in this process. The Latvian Welfare Groups in Milwaukee and Cleveland received donated books and journals from US medical libraries, boxed up the materials, shipped them to Latvia, and paid for the shipping.

The library has made much progress and many changes due to the Sister Library Project:

- The quantity and quality of information the library provides has grown.
- The prestige and level of importance of the library has risen.

The library does not exist just for itself. The library is an essential component for the people of Latvia to get quality medical treatment. The library provides medical information that improves the professional knowledge of Latvian health professionals. Latvia has recently joined the European Union, and the sister library project has greatly helped our library be ready to play on this new stage.

4:15 p.m.

Sister libraries: moving forward

Glendine Smith, library director, Holberton Hospital, St. Johns, West Indies, Antigua and Barbuda, and **Ellen Sayed, AHIP,** information services librarian, and **Justin Robertson, AHIP,** information services librarian/Web designer, Biomedical Library, University of South Alabama–Mobile

The Holberton Hospital Medical Library on the island of Antigua in the West Indies, is the sister library of the Biomedical Library at the University of Alabama–Mobile. This sister library relationship has been in existence one year. Prior to that, the Holberton Hospital library was one of two libraries chosen to be in the Sister Library Initiative by the International Section of MLA. This paper will examine the sister library arrangement between the Antiguan library and the Biomedical Library in Mobile, AL, during the last year. It will describe the continued work on the Holberton Hospital Medical Library's collections and equipment, via donations, and the library's Web page, with links to a variety of electronic resources. Data from the library will be presented, showing the ongoing growth and improved access to medical information. The Antiguan library serves a 167-bed hospital, which has 500 employees, 34 physicians, nurses, and medical students in their preclinical years, dentists, pharmacists, and allied health professionals. The library also serves as a public information resource on the island.

4:35 p.m.

ALA's Sister Libraries/Bibliotecas Hermanas Initiative

Michael Dowling, director, Chapter Relations Office and International Relations Office, American Library Association, Chicago, IL

The American Library Association (ALA) began its Sister Library Initiative in 2000. The initiative is to encourage libraries of all types to create sister library initiatives. The presentation will discuss ALA's sister program, its Website, examples of successful sister library programs at Queens Borough Public Library and the new initiative to promote bibliotecas hermanas with libraries in Mexico.

Leadership and Management, Corporate Information Services, and Public Services Sections and Assessment and Benchmarking SIG

Paths to Power (Part 1): Influencing and Negotiating Skills: How to Get People to Do What You Want

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited Speaker Session

3:30 p.m.

Influencing and negotiating skills: how to get people to do what you want

Lynn Waymon, president, Waymon & Associates, Silver Spring, MD

When you don't want to crack down, back down, give in, or give up, it's time to negotiate and influence with ease. Learn the rules and tools for getting your point across as you propose ideas and make agreements with coworkers, bosses, contractors, vendors, people in other departments, family, and friends. If you have to deal with shrinking resources, difficult people, and sticky situations—and who doesn't!—hone your skills for making a point without making an enemy. In this interactive workshop, attendees will participate in simulations and experiments and get tips, strategies, and guidelines for communicating powerfully and influencing others.

Medical Informatics and Medical Library Education Sections

Power Partners: What Medical Informatics Can Do for Medical Librarians and What Librarians Can Do for Informatics

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited Speaker Session

3:35 p.m.

What else is new? Redefining librarians' roles in technology

Elizabeth Wood, AHIP, director, Lee Graff Medical and Scientific Library, City of Hope National Medical Center and Beckman Research Institute, Duarte, CA

Librarians' computer and technology skills are being utilized as never before as clinicians and researchers develop new informatics tools. Librarians are invited to join continuing medical education (CME) committees and to present at CME and grand rounds meetings, sharing their expertise with database construction, evidence-based medicine resources and integration of information resources. Libraries have varied roles in Integrated Advanced Information Management Systems projects; librarians may be involved in decisions about electronic patient records and medical/nursing school curriculum design. The expertise we have developed for more traditional library roles is now invaluable to the wider health care community. We need to redefine these roles to reflect how we can increase our integration into the informatics domain.

3:55 p.m.

Two roads diverged: the yellow wood of knowledge informatics

Julie McGowan, associate dean, Information Resources and Educational Technology, Ruth Lilly Medical Library, Indiana University School of Medicine–Indianapolis

Library science has been uniquely intertwined with medical informatics since its genesis. The National Library of Medicine has been the primary facilitator of medical informatics research and development in this country. However, because medical informatics has traditionally been the domain of physicians and Ph.D. researchers, librarians have generally remained outside the mainstream of medical informatics activities. Now they have an opportunity, and even a growing mandate, to use their unique skills in equal partnership with medical informaticans to provide knowledge-driven care, to educate the next generation of health care providers, and to facilitate research through access to decision-support tools.

4:15 p.m.

Bioinformatics and Biomedical Information Science and Technology Initiative (BISTI): new opportunities to unite health librarians and informatics

Charles Friedman, senior scholar, Division of Extramural Programs, National Library of Medicine (on leave from the University of Pittsburgh), Bethesda, MD

The "traditional" domains of health and biomedical informatics, health care, and health professions education, have provided numerous opportunities to merge the interests of librarians and informaticians. The rapidly emerging world of bioinformatics and the emergence of entirely new suites of end-user tools for biologists offer additional opportunities. There is widespread belief that biologists are not using these tools as well as they can be used and that end-user support of various types can enhance these efforts. This presentation explores whether this new world creates new opportunities for health librarians, and, if so, how these opportunities can exploited through new professional roles and educational programs as preparations for these roles.

4:35 p.m.

Medical informatics panel discussion

Panel discussion with Elizabeth Wood, Julie McGowan, and Charles Friedman.

Nursing and Allied Health Resources Section and African American Medical Librarians Alliance SIG

Sharing the Power (Part 1): Delivery of Effective Instruction

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Contributed Paper Session

3:35 p.m.

Learning intervention in literature search instruction assessed with a rubric instrument

Claudia Lascar, AHIP, reference librarian/assistant professor, Library; and **Doreen V. Kagan,** director, Educational Affairs; **João V. Nunes,** chairperson, Behavioral Medicine; and **George E. Brandon,** associate medical professor; Sophie Davis School of Biomedical Education; City College of New York, New York, NY

Objective: Describe the process, results, and benefits of intervention in information literacy instruction to: (a) overcome students' affective-attitudinal resistance and change students' perception of its usefulness, and (b) assess performance on specific cognitive tasks.

Methods:

- Setting: BS-MD program oriented toward primary care and medically underserved communities.
- Population: Successive freshman classes of talented recent high school graduates from diverse ethnic backgrounds (N = 200).
- Problem description: Students in small groups resisted practical training in information literacy, because they thought they already knew how to search and that further training would be useless and redundant. Despite their claims of proficiency, many students' actual performance of searching was disappointing. Their resistant, dismissive attitudes slowed learning and made it less effective.
- Intervention: Assess the effectiveness of student interview feedback, unguided instruction, and changed instructional techniques with a five-item rubric assessment tool developed to evaluate students' performance at every step of the literature searching process. The rubric was used over three years of employing this intervention.

Results: As a result of the interventions, student resistance dropped markedly. Students became less disruptive, more attentive, more involved in investigation, and willing participants in interactive discussion. Teaching returned to being a pleasant experience. Cognitive performance improved incrementally but less dramatically than affective-attitudinal parameters. Small differences in cognitive performance noted among the three-study year cohorts attested to consistent implementation of methodology. The rubric did not measure precision and recall of searching. However, it pinpointed areas of strengths and weaknesses in students' search strategy skills. This valuable information will facilitate customizing additional training.

Conclusions: This study evolved from concern about student resistance to acquiring a set of end-user lifelong learning skills and generated findings that concur with the substance of Kuhlthau's information search process model. To maximize learning, educators and librarians must address student attitudes and feelings as well as cognition. Successful study outcomes would not have been possible without effective collaboration between the librarian and course directors.

3:55 p.m.

Imparting the power of the library to the college of nursing

Alice Weber, assistant librarian, Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: To describe how a liaison from the Health Sciences Library can improve the effectiveness of the nursing faculty by sharing library expertise and other library resources, assisting instruction, using templates and guidelines, holding education sessions and users group meetings to discuss problems and solutions, and providing technical support and encouragement.

Methods: Case study: The Health Sciences Library has provided a liaison to College of Nursing to help faculty provide more effective instruction to bachelors, masters, and doctoral nursing students. The liaison is the coordinator of educational technologies and works with the nursing faculty by offering classes, workshops, one-on-one training sessions to faculty and staff, helping set up interactive video conferencing for distance classes, and assistance in database instruction.

Results: The nursing faculty completed a survey at the beginning of this project to determine their use and comfort level with different educational technologies. Another survey is planned to assess the changes and effectiveness of this program after several semesters of implementation. The College of Nursing will continue to have the Nursing students give evaluations of the program. By utilizing the resources of the Health Sciences Library, the nursing faculty make additional, and more consistent use of educational technologies such as WebCT, wireless classroom technology, interactive video conferencing, personal digital assistants (PDAs), users groups, etc. The faculty also utilizes the assistance of instruction librarians who are already teaching database searching and software such as PowerPoint, Excel, and Access. By developing templates, and offering technical support, the library can stretch the limited nursing faculty resources to adequately address both the on-campus and distance students.

Conclusions: It is anticipated that the observed increase in interaction of College of Nursing faculty with the library and its resources will result in improved effectiveness of teaching as measured by follow-up faculty technology surveys and ongoing student evaluations.

4:15 p.m.

A bridge across the state: establishing an electrifying connection between a historically black college and an academic health sciences center

Pamela J. Sherwill-Navarro, AHIP, librarian, and **Gloria A. McWhirter,** assistant professor, College of Nursing, University of Florida–Gainesville

Objective: This paper will discuss how a large academic health science center nursing program and the nursing librarian cooperated with a small historically black liberal arts college (HBCU) located approximately 100 miles south east of the university to develop a program designed to increase the

knowledge and utilization of research literature by the nursing students and faculty through course integrated instruction.

Methods: Since 1998, a collaboration has existed between two academic institutions college and division of nursing to increase diversity and to provide increased opportunities for minority baccalaureate nurses to transition to advanced practice. To enhance the already existing program a subcontract was obtained to facilitate the College of Nursing librarian in providing course-integrated instruction to the nursing students at the HBCU. The instructors from the HBCU who were teaching courses that would benefit from instruction on database usage, Website identification, and evaluation were contacted. Sessions were customized to meet the individual course objectives.

4:35 p.m.

Knowledge among health care professionals of evidence-based answers to complex clinical questions

Rebecca Jerome, assistant director, Filtering and Evidence-Based Services, Eskind Biomedical Library; **S. Trent Rosenbloom,** lecturer, Department of Biomedical Informatics; and **Nunzia B. Giuse, AHIP,** library director, Eskind Biomedical Library; Vanderbilt University Medical Center, Nashville, TN

Objective: To explore clinicians' knowledge of evidence drawn from the biomedical literature as part of the formal evaluation of a clinical librarian service.

Methods: Baseline knowledge assessment. Investigators obtained records of complex questions previously addressed by clinician librarians in the medical intensive care unit (ICU), neonatal intensive care unit (NICU), and trauma intensive care unit (TICU) of a large academic medical center. Using random numbers generated from a random number table, the authors selected results from ten previous complex clinical questions from each unit, then generated five questions each. Questions included one or more correct answer(s) out of five answers provided. All clinical team members completed and submitted the questionnaires during work rounds. Investigators classified participants' responses as correct, missed, or incorrect based on the evidence provided by the librarian in response to the original question. Test scores included the proportion of correct responses given to the correct answers for each question and a derivation of mean score across all questions and respondents.

Results: Thirty-one clinicians completed the assessment, including 7 in the MICU, 15 in the NICU, and 9 in the TICU. The group comprised 5 attendings, 5 fellows, 13 housestaff, 4 nurse practitioners, and 4 medical students. Overall, respondents responded correctly to 37% of the questions (SD 20%) and gave a mean of 1.1 incorrect responses per test (range, 0-3). Fellows had the greatest proportion of correct responses with 59% correct, followed by advanced practice nurses with 39% correct and attending physicians with 39% correct. Housestaff responded correctly to 32% of the items; this group had the greatest number of misconceptions (mean of 1.3 incorrect responses per test). Although the clinicians in MICU responded correctly to the questions more often than those in the TICU (50% versus 23%, corrected $P = 0.02$ for multiple comparisons), they also had a greater number of misconceptions (1.6 per test versus 0.44 per test, corrected $P = 0.03$ for multiple comparisons).

Conclusions: These results provide investigators with crucial baseline data that will inform future analysis of the effect of librarian interventions on overall knowledge among members of patient care teams.

Research Section and Assessment and Benchmarking and Clinical Librarians and Evidence-Based Health Care SIGs

The Power of Evidence (Part 2): Discovering Our Effectiveness with Outcomes

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited and Contributed Paper Session

3:35 p.m.

Meeting the two-minute standard for timely digital library use in medical education and hospital/clinic environments: analysis of a convenience sample

Steven L. MacCall, assistant professor, School of Library and Information Studies, University of Alabama–Tuscaloosa

Objective: The purpose of this study was to evaluate the use of Clinical Digital Libraries Project (CDLP) digital libraries in terms of their facilitation of timely information retrieval for users originating in medical education and hospital/clinic environments. Research has documented a two-minute standard in this area.

Methods: Convenience sample analysis. CDLP Web server log was analyzed over a twelve-month period (7/2002 to 6/2003) for evidence of timely digital library use after a sample of users were referred to clinical topic pages from Web search engine searches. For inclusion into the sample, searches met information-seeking criteria as reflected in Web server log activity and were further limited to those originating from medical school environments (26% North American and 19% international) and from hospitals/clinic environments (51% North American and 4% international). Timeliness was calculated as the difference between the timestamps of the first and last Web server log "hit" during each search in sample.

Results: Of the 864 search engine searches studied, 48% were less than 1 minute, 41% were 1–3 minutes, and 11% were 3–5 minutes. These results were analyzed by environment (medical school versus hospital/clinic) and by geographical location (North American versus international). Digital library use exhibited a pattern of less than 1 minute searches in these contexts. Though the results were not consistent on a month-by-month basis over the entire time period, data for 8 of 12 months showed that less than 1 minute searches predominated and data for 1 month showed an equal number of less than 1 minute and 1–3 minute searches.

Conclusion: The CDLP digital libraries provided timely access to high-quality Web clinical resources when used in medical education and hospital/clinic environments from North American and international locations and provided access to the sought information within the recently documented two-minute standard.

3:55 p.m.

Library as place: results of a delphi study

Logan Ludwig, AHIP, associate dean, Medical Center Library, Stritch School of Medicine, Loyola University, Maywood, IL; and **Susan Starr,** director, Biomedical Library, University of California–San Diego, La Jolla, CA

Objective: What activities will take place in health sciences libraries in the future and how will this effect building design?

Method: We conducted a delphi study with a diverse panel of health sciences library directors from large and small academic institutions, hospital librarians, health care administrators, information technologists, architects, and library building consultants. They were initially asked open-ended questions regarding the use of libraries in 2025. Change statements were extracted from their answers. Participants were then asked to vote on the likelihood, desirability, and impact on building design of each statement and to share the reasons for their answers. Votes and reasons from this round were shared with participants, and they were asked to vote again. A third round was conducted on a few selected items.

Results: Consensus was obtained on fifty-two of the seventy-five change statements. As a result of anticipated developments in scholarly communication, economics, technology, and learning environments, experts forecasted that libraries will become knowledge management centers, sites for study and consultation, places to use highly specialized technologies and centers for curriculum development. Some libraries may also be sites for support of clinical trials, publishers of institutional information, repositories for research data, centers for curriculum development, and providers of specialized services to clinicians or the community. Overall the future design of our health science libraries will reflect their future functions.

Conclusions: There will be greater institutional variation in health science library functions and corresponding variation in building design. Differing views of institutional cultures, economics, library missions, and human nature make it hard to predict the future, but MLA, the Association of Academic Health Sciences Libraries, and NLM can all assist in achieving desired futures for our libraries.

4:15 p.m.

Defining and measuring library contributions to institutional goals

William Nelson, professor, Augusta State University, Augusta, GA

Increasingly libraries are required to assess and measure outcomes of their operations that support institutional goals, and accrediting organizations have incorporated outcomes assessment into their library standards. The speaker will bring his experience and knowledge from developing academic library standards and conducting workshops on outcomes assessment in libraries to share insights on the practical application of those measures.

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

Lighting the Path: Digital Repositories in the Real World

Monday, May 24, 2004, 3:30 p.m.–5:00 p.m.

Invited and Contributed Paper Session

3:35 p.m.

Eighteen months and counting…a report from trenches

Rea Devakos, co-ordinator/information specialist, TSpace Service, Information Technology Services/Gerstein Science Information Centre, Library, University of Toronto, Toronto, ON, Canada

Purpose: Self-sustaining institutional repositories (IRs) present unique collaborative opportunities since they shift traditional roles and publishing power. This presentation will report on lessons learnt from the implementation of an IR: TSpace (www.tspace.library.utoronto.ca). Planning, implementation, and evaluation decisions will be detailed, with particular emphasis on early adopters. Alternative approaches to IRs, a technical overview, and a status report on the DSpace Federation will also be presented.

Setting and Participants: The University of Toronto (U of T) is a member of the DSpace Federation. The federation is developing openly available code and documenting implementation. The U of T is ranked fifth by the Association of Research Libraries. The Gerstein Science Information Centre is Canada's largest academic health science library.

Brief Description: Initial deployment focused on populating the repository with representative faculty authored materials while adapting "mined" policies from other IRs.

Results/Outcome: As of February 2004, TSpace held approximately 700 items from 8 administrative units. Working closely with early adopters afforded much needed "real world" consultation and experimentation. Implementation required the development collection scope, copyright, communications, training, user support, content, and bibliographic access policies.

Evaluation: Formative evaluation is ongoing. Statistics, semi structured early adopter interviews, and emails are used to regularly reappraise the project.

3:55 p.m.

Feeling around in the dark: establishing the role of the library in a campuswide digitization project

Mary E. Piorun, AHIP, associate director, Library Systems; **James Comes,** associate director, Reference; **Jennifer Varney,** cataloger; **Lisa Palmer,** cataloger; and **Janet Dadoly,** collection development/reference librarian, Collection Development; Lamar Soutter Library; and **Gary Langevin,** senior application/database developer, Academic Computing; University of Massachusetts Medical School–Worcester

Objective: Describe the library's leadership on a team with representatives from academic computing and the faculty to develop a database of medical images. The library will (1) add value to the project by offering expertise in methods of organization, indexing, cataloging and project management; (2) develop policies and procedures for participation; and (3) maintain visibility by promoting both the library and its staff.

Methods: Case study: The library has marketed the idea of an image database for the past four years. In early 2003, the project was funded and a campuswide task force was formed. The library took the lead in project management by holding weekly and monthly meetings, establishing milestones, setting deadlines, and drafting usage policies. The library played an important role by interviewing potential contributors and developing a database and record structure that meets the needs of users. The library also participates in the cataloging of images by designing workflow procedures that allow library staff to check all images for quality control and to assign MeSH terms. Task force members developed a training session on how to search the database and how to contribute images.

Results: A campuswide database of over 150 digital assets (and growing) has been created. The weekly and monthly meetings helped to keep project assignments clear and document changes to roles and responsibilities. Setting deadlines and establishing milestones helped to keep the project on schedule and progressing forward. The database structure and record format first developed by the team is meeting the needs of participants, but the library anticipates making adjustments as the database becomes more popular. Having MeSH terms assigned to each digital asset has improved searching for database users. To date, seven faculty members have been trained and are contributing to the database.

Conclusions: The library has a valuable role to play in campuswide digital initiatives. Collaborating with information services has allowed both departments to gain a greater appreciation of the skills and resources that each department has to offer and provided the library with greater visibility and new opportunities for outreach and education.

4:15 p.m.

Health and life sciences collection promotes collaboration throughout university by providing digital resources for teaching

Brenda Seago, AHIP, director, Computer Based Instruction Lab, School of Medicine; **Susan Deihl,** curriculum development specialist, School of Social Work; **John Bigbee,** professor, and **Alice Pakurar,** professor, Department of Anatomy and Neurobiology; and **Chris Stephens,** director, Applications Development, Office of Faculty and Instructional Development, School of Medicine; Virginia Commonwealth University–Richmond

Objective: The Health and Life Sciences Image Collection, a searchable Web database, was developed to make histology images available for teaching purposes and to share the images with faculty across Virginia Commonwealth University (VCU).

Methods: Case study. With a grant from the Center for Teaching Excellence, VCU, the School of Medicine piloted a project to display 75 high-quality, original histology images on the Web and make them available for teaching purposes. Two faculty members from the Department of Anatomy and Neurobiology provided original images from over 700 images used to teach the first-year medical student histology course. An indexing system was developed, using the Medical Subject Heading (MeSH) model. Copyright for the images is held by VCU, so faculty have access rights to the images through the Web interface. Faculty can download images for use in PowerPoint presentations or label them for classroom teaching or other instructional purposes.

Results: After an initial year-long project to select, index, and mount histology images on the Web, the Health and Life Sciences Collection interface has been tested and evaluated. Procedures were developed for faculty wanting to add images to the collection. Specifications for images include quality, size, resolution, indexing, copyright, programming, and ability to track Website usage. We are now accepting proposals for building the collection, based on what has been learned working with university faculty.

Conclusions: Many faculty have slides they would like to share with other faculty across the university, but they have been unable to do so in the past. The Health and Life Sciences Collection, through the selection of high quality images and standardized indexing, makes images accessible for teaching purposes.

4:35 p.m.

Digital archives at the National Library of Medicine

Diane Boehr, cataloging unit head, National Library of Medicine, Bethesda, MD

Looks at the planning and development of various digital archiving projects at the National Library of Medicine with a focus on the workflow effects for Technical Services staff.

Collection Development and Technical Services Sections

Cease the Power: Libraries and the Open Access Movement

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Invited and Contributed Paper Session

2:35 p.m.

Full speed ahead: scholarly publishing issues in the science, technology, and medicine marketplace (and how to explain it to your faculty)

Julie A. Schneider, head, Technical Services and Collection Development, and Allan Barclay, Webmaster, Health Sciences Libraries, University of Wisconsin–Madison

Objective: To determine how to best educate and communicate with faculty about scholarly publishing issues and the advantages of publishing in open access journals and forums.

Methods:

- Research what other libraries have done to communicate scholarly publishing issues with faculty
- Work with department liaisons on determining the most effective communication forum
- Create a informational Web presence on scholarly publishing issues and open access journal options
- Develop a timeline for creating the Web presence and communicating with library staff and faculty
- Train library liaison on scholarly publishing issues
- Develop a survey to determine impact of Web presence on publishing decisions by faculty
- Develop a survey to determine impact of Web presence on faculty's understanding on journal assessment and cancellation issues

2:55 p.m.

Cease the power: one step at a time

Mary L. Ryan, AHIP, library director, UAMS Library, University of Arkansas for Medical Sciences–Little Rock

Objective: To provide a brief history of the open access publishing movement and to review some of the activities used to promote open access publishing on campus.

Methods: Case study: Methods used to promote open access publishing on campus include presentations at various faculty meetings, individual meetings with selected faculty (including the deans of the colleges and graduate school), purchase of an institutional membership in BioMed Central, development of a Scholarly Publishing section of the library's Website, publication of articles in the library's online newsletter, periodic distribution of updates to the College of Medicine research email discussion list, and drafting of a letter sent by the chancellor to the state's congressional delegation in support of the Public Access to Science Act. An open access publishing Webliography and copies of some handouts distributed at faculty meetings will be provided at the presentation.

Results: Many people on the University of Arkansas for Medical Sciences (UAMS) campus are now aware of open access publishing issues, and the number of them who submit articles to open access publishers has increased. Two UAMS researchers were persuaded to start a new journal with BioMed Central rather than the for-profit publisher with whom they were originally negotiating. However, some faculty are still not convinced that the open access publishing movement will be successful in the near future, if at all. We plan to continue to promote open access publishing through various means and to encourage UAMS faculty to become involved in finding a solution to the problems with the current scholarly publishing system.

Conclusion: While promoting open access publishing on an academic health sciences campus can be very time consuming and sometimes frustrating, it is an important and rewarding activity in which the library can and should play an important role.

3:15 p.m.

Promoting open access on a health sciences campus

Peggy Tahir, information services librarian; **Annaliese Taylor,** collection development librarian; and **Gail Persily,** director, Education and Public Services, and associate director, Center for Instructional Technology; The Library and Center for Knowledge Management, University of California–San Francisco

Purpose: This paper will describe outreach efforts to faculty to promote open access models of publishing

Brief Description: The current crisis in journal publishing—wildly escalating prices, combined with economic downturn and strapped budgets—has left libraries searching for ways to survive and continue to provide comprehensive scholarly resources to their campus communities. Over the past several years, alternatives to traditional publishing have emerged. This paper will focus on several avenues used by our library to promote and provide alternative publishing models to the campus. It will discuss institutional licensing of BioMed Central and Faculty of 1000, the eScholarship initiative, and the Public Library of Science. A series of scientific publishing symposiums have been organized that focus on new models for scholarly communication. These provide a forum for faculty who are on open access editorial boards or who have published in open access journals to discuss their viewpoints and experiences with other faculty. The library is also developing Web pages that outline many of these issues and provide information and links to a variety of alternative publishing models. Marketing strategies and publicity streams will also be discussed.

Evaluation Method: Library staff will monitor use of open access journals and track faculty who publish in these journals.

Consumer and Patient Health Information, Cancer Librarians, History of the Health Sciences, and Relevant Issues Sections

Power to the Patient: New Definitions of Health Literacy

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Contributed Paper Session

2:35 p.m.

Keeping it real: using the natural language of sexual health information to empower urban adolescent health consumers

Nicola J. Cecchino, electronic resources librarian, and **Holly A. Harden,** liaison librarian, Welch Medical Library; and **Susan Rohner,** public health librarian, Lilienfeld Library; Johns Hopkins University, Baltimore, MD

Objective: To fulfill the need for further development and improvement of reproductive health terminology in health-related databases, especially those serving urban adolescent consumers, by creating a controlled vocabulary that provides both medical and slang terminology to improve access to valuable health information. The project aims to close the gap between health care consumer and provider through understanding, awareness, and cultural sensitivity of reproductive health terms.

Methods: Case study involving content analysis. Fifty terms are mapped to incorporate culture-specific slang and medical vocabulary used in the clinical setting. The vocabulary is selected based upon universal colloquialisms used at clinic patient visits. The terms are also searched in adolescent reproductive health Websites to identify comparative vernacular. The mapped terms are indexed in a manner that could be used for a consumer health database allowing for privacy and anonymity.

Results: Terms were modified based on the number of times slang was used in either the clinic setting or found on the Web. Birth control methods and sexually transmitted infections had the lowest incidence of slang terms in the six clinics contacted, while sexual activities and anatomy vocabulary had the largest number. Web searches of slang terms using Google and MedlinePlus yielded fewer relevant hits, but sixteen reproductive health Websites had higher retrieval.

Conclusion: Based on these findings reproductive health information is not well supported in some health databases or Websites and results are often inappropriate. Adolescent health literacy and access to appropriate information can be enhanced with correct mapping of slang terms within databases or Websites.

3:15 p.m.

Accessing information about individual health insurance from "quote" Websites

Kui Chun Su, NLM informatics fellow, Health Management and Informatics, and **MaryEllen C. Sievert,** professor, School of Information Science and Learning Technology, University of Missouri–Columbia

Objective: To systematically evaluate quote Websites to examine how easy or difficult to find individual health insurance.

Methods: Comparative study: We examined ten quote Websites. The varying degrees of ease or difficulty of getting a quote were quantified in terms of the number of items requested of personal data, the number of separate pages to fill out one form, and how soon a quote was posted, based on a hypothetical US family of four. The manner in which the quote Websites provided information about the health plans was health plans that could be viewed in detail simultaneously, the presence or absence of health benefit descriptions from the health plans, and the presence of information on the health insurance carriers.

Results: Some quote Websites did not reveal information about themselves fully; they tended to be brief and ambiguous. The number of items requested of personal information varied from site to site, ranging from 6 to 152. The number of separate pages to fill out one form ranged from 4 to 15. The amount of time needed to fill out the complete form (including the printing time but excluding the time to learn about the Website) for all family members ranged from 8 to 31 minutes. Six quote Websites could not provide a quote immediately. If a quote Website could provide an immediate quote, comparative information on health plans was given. For the 4 Websites that provided an instant quote, the number of health plan choices ranged from 0 to 35. The maximum number of health plans that could be viewed in detail simultaneously ranged from 3 to 6. One Website provided the full description of the health plan benefits plus additional information about the insurance carriers.

Conclusion: There is a great variation in the degree of ease or difficulty of getting a quote for individual and family health insurance. Despite the difficulty, the Internet has the potential to provide sufficient information relevant to health plan decisions *before* making a purchasing decision about a health plan.

3:35 p.m.

The 24 Languages Audiofile Project

T. Elizabeth Workman, clinical librarian, Hope Fox Eccles Health Sciences Library, and **Nancy T. Lombardo,** systems librarian, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: The 24 Languages Project provides consumer health information in 24 different languages, and includes over 200 portable document format (PDF) brochures for health consumers. Project staff recognized the need for this information also to be in an audio format for individuals who have low vision or who are literacy challenged. In fall of 2002, the authors submitted a successful grant proposal to NN/LM outlining the creation of online multilingual sound recordings of consumer health materials.

Methods: Project staff work with individuals and groups on and off the university campus to locate native speakers to read aloud 200 of these online brochures. The project technician records these narrations and posts them to the project Website for downloading or streaming by Website visitors. The

project's principle investigators market the recordings through partnerships with community groups, workshops at regional professional conferences, and "train the trainer" workshops at libraries and other facilities throughout the state. Regional ethnic and other media will also advertise this service.

Results: This is an ongoing project, so outcomes are continually assessed. Initial feedback has been positive. Website use trends are positive; site visits have increased nearly 35% between the first and third quarters of 2003. Staff can more clearly measure success as the project develops.

Conclusions: Project success is measured through several methods. Web statistics chart increases in use of the project's Website. The number of other Websites that link to it will also gauge interest in this new resource. Feedback from other libraries, community groups, and individual users will also document the project's success.

Corporate Information Services and Leadership and Management Sections and Assessment and Benchmarking SIG

Paths to Power (Part 2): Empowerment by the Numbers: Using Your Data to Negotiate with Administrators

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Invited Speaker Session

2:35 p.m.

Power grids and the direction of the current

Eileen Stanley, AHIP, manager, Library Services, Allina Hospital & Clinics, Minneapolis, MN

Whether you report to the director of human resources, vice-president of communications, dean of the medical school or chief information officer, the ability to use the data you own to impress, influence, or persuade the leaders of your organization is necessary. How many ways are there to do this, and how much effort does it take? A variety of paths lay before you to accomplish your journey to new funding, expansion of programs and services, and inclusion in the next initiative to move your organization forward. Balanced scorecards and alignment with your organization's strategy may get you there.

2:55 p.m.

Making both the business and quality case for clinical information innovation

Linda Hogan, director, Medical Informatics and Clinical Transformation, Information Services Division, Pittsburgh Mercy Health System/Catholic Health East, Pittsburgh, PA

Objective: This presentation describes the reproducible methods used to measure the value of clinical information innovation and the approach used to persuade hospitals to undertake this transformation.

Methods: Catholic Health East (CHE) is a multi-facility health system of thirty-two hospitals and twenty-seven nursing homes and ambulatory care facilities who share a common mission to provide care for the underserved. In 2003, CHE began the process of identifying clinical transformation initiatives that would be applicable to as many of the member hospitals as possible. The value of the selected initiatives was supported in the literature, and could include information technology, process, or structural patient care delivery changes. A team examined the literature to identify about twenty initiatives that were worthy of consideration. Seven initiatives were selected:

1. Clinician Order Entry w/Decision Support
2. Intensivists Managing Critical Care Patients
3. Hospitalists Managing Acute Care Patients
4. Medication Administration Checking Using Hand-Held Devices & Bar Coding
5. Distributed Medication Dispensing Using "Smart" Medication Cabinets
6. Voice Recognition in the Emergency Room and Radiology Departments
7. Clinical Pharmacy Initiatives: Pharmacists performing clinical rounds having the latest clinical information available to them via handheld devices

The literature was used to determine an initial estimate of the value and costs of a project. The value was determined using both qualitative and quantitative methodologies. Included were measures of patient care quality such as infection rates and ventilator use. Quantitative measures included reduction in variable costs for medications, laboratory tests, and other ancillaries. Reductions in adverse drug events were also treated as a quantitative savings. Metrics and goals were identified for each project. These will be used to track the progress of the pilots on a monthly basis. The pilots will operate throughout 2003 and into 2004. CHE engaged the remainder of the hospitals in a number of ways to prepare them to receive the results of the pilots. CHE believes that this rigorous, knowledge-based approach to clinical transformation will demonstrate the value of the initiatives in such a way that member hospitals will step up and implement them due to their compelling proven value.

Note: The entire project is lead by a medical librarian.

3:15 p.m.

Designing a powerful library: a case study in reorganization

Laurie L. Thompson, AHIP, director, Libraries, and **Brian Bunnett, AHIP,** associate director, Library, University of Texas Southwestern Medical Center–Dallas

Objective: To revitalize an organization too focused on supporting print resources and to align it with a primarily digital environment; to have the right employees doing the right jobs, increasing the library's efficiency and effectiveness.

Methods: Case study: Setting: an academic health sciences library with 22 professionals and 30 paraprofessionals serving a core clientele of nearly 20,000. The library had a flattened organizational structure. Departments were primarily responsible for the print collection, while interdisciplinary teams maintained and enhanced the digital collection and services. A more flexible organization with a clearer focus on the digital library, doing the right things (effectiveness) in the right way (efficiency) was needed. A task force of professionals and paraprofessionals developed a methodology and timeline to address the need. The task force used several

methods, including group idea generation, individual job and team analyses, managers' departmental analyses, statistics, an environmental scan, and a literature review to refine the library's mission statement and create a new organization more clearly focused on the digital environment. The process was data-driven, flexible, and inclusive.

Results: A new organizational structure was implemented in September 2003. Minimal modifications have been made since its inception. New assignments were well-received; however, some initial confusion with unit charges needed clarification. All but three teams were retired as their responsibilities migrated to departments. A feature of the new organization is the Organizational Efficacy Council (OEC), which continuously evaluates the library's effectiveness and efficiency. The council's oversight is expected to ensure a library better aligned to meet the needs of the digital environment. The OEC experienced growth pains while defining its mission but offers an opportunity to mentor new members, and gives them broader perspective on library-wide issues. It is developing an evaluation methodology using a new strategic plan with goals directed to maximizing digital resources.

Conclusion: Preparation, research, and communication efforts resulted in a more efficient and effective organization better aligned with the library's mission, positioning it to better accomplish the shift to a digital environment.

3:35 p.m.

Transforming an academic health sciences library through the creation and implementation of a strategic marketing plan

Joan B. Schlimgen, head, Access Services, Arizona Health Sciences Library, University of Arizona–Tucson

Objective: We created a futures-oriented marketing plan involving the active participation of the staff and users of the Arizona Health Sciences Library (AHSL) with the purpose of transforming and repositioning the library to meet the challenges and opportunities emerging at the university's health sciences center.

Methods: Marketing audit: AHSL is a large academic health sciences library serving diverse populations both in the university and throughout Arizona. Several steps were followed: design a framework for the process, conduct a marketing audit to examine AHSL's internal and external environments and initiate market research. Facilitated meetings with each library department were utilized to generate input about our products, core competencies, areas of expertise, and target markets. In addition feedback was solicited on the current needs of the library's users and their future needs based on trends, risk assessments, and perceived opportunities. Market research was initiated within the target markets through surveys, interviews, and focus groups. Gathered intelligence was summarized for presentation to the library's leadership council for review and prioritization of the strategic marketing goals and objectives for implementation during the year.

Results: Librarians and staff from each of the library's six departments actively contributed to the marketing audit phase through facilitated discussions. The completed audit identified the skills and areas of expertise for each department; the key services and products supported by the library; and the major characteristics, trends, and needs assessments for sixteen target markets. Five public service librarians were trained to facilitate focus groups and one-on-one interviews with the external target markets that were deemed high priority. To date, six to ten interviews or focus groups have been conducted or scheduled. Information gathered from all sessions were transcribed and organized into logical segments for review and inclusion in the marketing plan. Clear priorities and goals began to emerge as the data were analyzed.

Conclusions: Several factors contributed to the successful completion of the marketing audit: a clear vision about its value and purpose, positive communication and feedback to all participants, and strong listening skills. This phase took nearly six months to complete.

Dental, Educational Media and Technologies, and Pharmacy and Drug Information Sections

PowerPack: Innovations in Packaging Online Curricula

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Invited and Contributed Paper Session

2:35 p.m.

Effective leadership and advocacy: amplifying professional citizenship

Cynthia Boyle, director, School of Pharmacy, University of Maryland–Baltimore

Objectives: "Effective Leadership and Advocacy" is an elective implemented to develop doctor of pharmacy students' leadership and political advocacy. Students learn various leadership and organizational management skills and gain direct experience in the political process and community action through service-learning activities.

Design: Students attend classes and participate in individual and group assignments for required and elective elements. The fall 2003 course has involved synchronous teaching with Medical College of Virginia doctor of pharmacy students and faculty and the use of Internet2 and Blackboard 5.0.

Assessment: Students submit portfolios for key activities to meet course objectives. Student performance during group debates and class discussion (participation and professional behavior) are also assessed.

Conclusion: During three offerings, the course has increased student and faculty participation in statewide advocacy for pharmacy education and service. The state's pharmacy organizations, school's administration, and university's Office of External Affairs have utilized students more effectively in health care legislation and school resource advocacy initiatives.

2:55 p.m.

You want me to do what to that patient?

Leonard Litkowski, associate professor, Department of Restorative Dentistry, Dental School, University of Maryland–Baltimore

Purpose: The purpose of this presentation is to report on the integration of Web-based learning tools for the teaching of dental procedures in preclinical and clinical settings.

Description: Dentistry requires both knowledge of a subject area as well as the ability to perform microsurgical procedures. The feedback from tactile and visual senses is important in the completion of a procedure. However, it is often difficult to use words to describe a three-dimensional procedure to a novice student. There is often a disconnect between the description from an instructor and the processing of a student. The ability to access a review or "vignette" of a procedure with visual aids leads to better understanding of techniques. In clinical and preclinical settings, it has been difficult to allow students to access detailed reviews of procedures in their own time frame. For example, multiple students are often performing different procedures when working with the same instructor. It is impossible to stop and review a videotape and come back to the patient. The design of a Web-based accessible system of a library of reviews fills this gap. A student or practitioner in remote areas can access these reviews prior to working on a patient. Plus, the ability to incorporate new techniques and knowledge allows the almost constant review for timeliness of the information. A description and examples of this new Web-based system will be presented.

3:15 p.m.

eCurriculum: a powerful way to provide content for medical education

Brenda Seago, AHIP, director, Computer Based Instruction Lab; **Robby Reynolds,** curriculum specialist, and **Anita Navarro,** director, Curriculum Office; and **Jeanne Schlesinger,** director, Instructional Development, and **Chris Stephens,** director, Aplications Development, Office of Faculty and Instructional Development; School of Medicine, Virginia Commonwealth University–Richmond

Purpose: The eCurriculum Website was designed to provide enhanced course content to medical students at Virginia Commonwealth University. Static syllabus pages were transformed with interactive content made available through a School of Medicine password protected Website.

Methods: A typical syllabus contains hundreds of pages, depending on the length of the course. When syllabus content was reviewed before being put on the eCurriculum Website, we were able to make sure that each lecture had learning objectives and that those objectives were actually linked to lecture content. In addition, PowerPoint presentations were posted and interactive quizzes were developed to accompany lecture material. Lecturers provided original, high-resolution images to go along with lecture content. Lecturers also identified images other than their own so that copyright permission to use them could be sought. Video and audio clips were embedded in lecture material to augment the understanding of difficult concepts. A bulletin board was developed for each course so that students could pose questions and other students or the course director could respond to the questions.

Results: The eCurriculum Website is an every day part of student learning and can be dynamically updated by course faculty. The bulletin board for each course contains lively discussions by students and faculty asking questions and clarifying course content. The goal is to have all course content available on the eCurriculum site within the next year.

Conclusions: Student learning is enhanced with an eCurriculum Website that links all relevant content from one location.

3:35 p.m.

Totally modular dude! Empowered educational technology

Bart Ragon, library technology services and development manager, and **Karen Knight,** educational services coordinator, Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Objective: In the fall of 2003 the Digital Library Infrastructure Team collaborated with the Educational leaders in the library to identify a technology-based solution to aid the instructional needs of the library. This session will discuss the testing, development, and implementation of modular educational components for the purpose of on demand instruction for selected library services.

Methods: A review was conducted of various software packages for the delivery of multimedia learning content via the Web. Of the software solutions analyzed three were chosen to convert the content and educational objectives of the library's proxy set up tutorial to determine if the delivery of the content could be enhanced by a multimedia application. Macromedia Breeze, ViewletBuilder, and RoboPresenter were each assigned the same content and same set of tasks to ensure that the evaluation was based on the performance of the software and not on the content itself. Tasks included the use of still captures, audio narration, animation, and video captures. Each product was evaluated against a list of set objectives that encompassed its ability to handle the defined task as well as its ability to convey the learning objectives of the tutorial to library users. The software was also evaluated on the ease of its graphical user interface (GUI) to assess a non-technological person's ability to create and maintain multimedia content for the Web.

Health Association Libraries and Hospital Libraries Sections and Mental Health SIG

Enhancing Aging: Resisting the Power Outages of Late Life

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Invited Speaker Session

2:30 p.m.

Enhancing aging: resisting the power outages of late life

Carl Eisdorfer, professor and chairman, Department of Psychiatry and Behavioral Sciences, University of Miami School of Medicine, Miami, FL

The aging of society is a political, economic, and social issue of global consequence. In the United States, the aging of the "boomers" is shifting the demographics to make aging a major issue. Fifty percent of currently employed librarians expecting to retire in the next five years makes aging a library issue. No matter what our age, this is an issue we need to confront—either through managing older employees or dealing with how aging affects ourselves and our performance. In this session, Dr. Carl Eisdorfer will inform us as to the changes in age demography and some of its important implications. He will also give us some personal insights on improving the quality of life in later years. Specific topics will include: (1) demographics of aging, including gender, ethnic, and social differences across the world; (2) how do we age?: biopsychosocial issues in aging; (3) quality of life and well-being in later life: normalcy, pathology, optimization; (4) major mental health issues in later life; and (5) issues for our future in an aging society.

History of the Health Sciences, Health Association Libraries, International Cooperation, Public Health/Health Administration, and Veterinary Medical Libraries Sections

Emerging Infectious and Zoonotic Diseases: The Power of Disease on Society

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Contributed Paper Session

2:35 p.m.

Information pathways during the Severe Acute Respiratory Syndrome (SARS) crisis in a Sydney metropolitan hospital

Rolf H. Schafer, chief librarian, Walter McGrath Library, and **Paul C. Smollen,** clinical nurse consultant, Infection Control Department, St. Vincents Hospital Sydney, Darlinghurst, New South Wales, Australia

Objective: This paper will explore the role of information pathways at a Sydney metropolitan teaching hospital during the 2003 Severe Acute Respiratory Syndrome (SARS) crisis. The paper discusses how these information pathways were developed and utilized in locating, disseminating, and storing health information pertaining to SARS.

Background: The rate in which SARS information from all health agencies and news sources was announced was staggering. Information on the disease was being released up to five times a day by some sources. The containment procedure for SARS was not unlike any other air-borne viruses so far encountered. All this information had to be selected from authoritative sources then rapidly disseminated so as to be accessible by all hospital staff. To prevent a possible hospital outbreak of SARS, the health staff within the hospital required this information to be correct, current, and accurate in order to identify potential sources and thus generate containment and treatment procedures.

Methods: A descriptive analysis report of the information pathways created at St. Vincent's Hospital, featuring a case study presentation of a SARS admission.

Results: The information pathways that were developed revealed that accurate, current, and reliable information is critical for disease prevention when confronted with a newly emerged pathogen. It further demonstrates the value of having timely health information accessible anytime to health staff in the clinical setting. By having this information on hand as well as multiple education sessions, there was a reduction in staff fear and anxiety about SARS and improved clinical practices for disease containment. The ability to network all of the relevant hospital departments and personnel via the information pathways was the major contributing factor for SARS prevention. Accessing and linking the various national and international agencies was seen as a success to the development of the information pathways.

Conclusion: The development and implementation of information pathways demonstrates the value of having timely health information accessible in the clinical setting, resulting in St. Vincent's Hospital now having the capacity to combat, treat, and contain other newly emerging pathogens.

2:55 p.m.

Reemerging infectious diseases: a comprehensive investigation of the adequacy of medical literature coverage

Pauline Todd, coordinator, Monograph Collection Development; **Taneya Koonce,** assistant director, Webteam; **Jennifer Ann Lyon,** coordinator, Research Informatics Consult Service; **Mary Teloh,** coordinator, Special Collections; and **Nunzia Bettinsoli Giuse, AHIP,** director; Eskind Biomedical Library, Vanderbilt University, Nashville, TN

Objective: By developing comprehensive descriptions of five diseases, this study investigated the current literature coverage and the need for reliance on original scientific material describing the conditions.

Methods: This investigation focused on five infectious diseases (anthrax, botulism, plague, smallpox, tularemia) listed as category A by the Centers for Disease Control and Prevention. They are caused by high-priority agents with the potential for possible future major impact on public health. Using evidence identified by extensive exploration of electronic and print resources, a team of experienced librarians with clinician oversight compiled a comprehensive description

of each disease. Each disease description incorporates history, signs, symptoms, and laboratory findings. The team carefully analyzed the original sources of data supporting each disease finding, and particular attention was given to their specificity and sensitivity, as this information will be essential in equipping library staff with the necessary knowledge of where key studies on those conditions chronologically reside.

Results: A detailed quantitative and qualitative analysis of articles written between 1896 and 2004 was conducted in 3 scholarly journals (*New England Journal of Medicine, Lancet,* and *Journal of Infectious Diseases*). The data showed that there were 51 articles describing 221 cases of botulism, 37 articles describing 1,654 cases of plague, 58 articles describing 104 cases of anthrax, 17 articles describing 147 cases of tularemia, and 49 articles describing 719 cases of smallpox. In addition to presenting the above-mentioned quantitative data, the authors plan to present qualitative data indicative of important historical trends.

Conclusions: Libraries' primary reliance on recent issues of journals demands careful assessment of material that may hold key archival knowledge for diseases eradicated in the West but are now reemerging as the focus of bioterrorism preparedness. A careful analysis of where evidence resides for these diseases will equip libraries with the knowledge necessary to make informed decisions.

3:15 p.m.

Canary in a haystack: building a database of animal sentinel literature

Matthew Wilcox, EPH librarian, Epidemiology and Public Health Library, School of Public Health; **Daniel Chudnov,** librarian/programmer, Center for Medical Informatics, School of Medicine; **Brynn Taylor,** researcher, School of Public Health, School of Forestry and Environmental Studies, School of Medicine; **Zimra Gordon,** veterinarian and researcher, School of Public Health, School of Medicine, Rippowan Animal Hospital; **Prakash Nadkarni,** associate professor, Center for Medial Informatics, School of Medicine; and **Peter Rabinowitz,** assistant professor, Occupational Medicine, School of Medicine; Yale University, New Haven, CT

Objectives: To overcome barriers that limit the use of animal sentinels to reduce human environmental health hazards, including difficulties in locating studies in disparate biomedical databases and poor communication between human and animal health professionals. To make the literature on animal sentinels more accessible by using a mix of traditional and contemporary information retrieval techniques.

Methods: Comparative study: We used sophisticated automated queries to a range of databases (including MEDLINE, AGRICOLA, CAB Health, BIOSIS, others) to harvest reports of studies of potential interest to the animal sentinel community, members of which study wildlife, domestic, and companion animals for health indicators potentially signifying human health hazards. Curators from this community use a study classification protocol and several additional indexing fields to categorize studies. We evaluate whether this additional indexing helps researchers from diverse disciplines more easily navigate the breadth of available information, which currently is only available through databases that use vastly different vocabularies and comprise too many resources for individuals to track. Additionally, we evaluate approaches for bridging the diverse controlled vocabularies used to index each database, including concept matching using the UMLS. This work is being sponsored by a grant from the National Library of Medicine.

Results: We have refined our search techniques as the concept we are looking at is not well defined in the database thesauri (particularly in MeSH). We have been able to integrate citations from multiple sources using a general-purpose metadata conversion system. The system preserves the rich vocabulary and other indexing content from the different sources and allows for search and display of terms from any source vocabulary. More investigation is needed on integrating subject headings from the different vocabularies. Feedback from beta testers indicates that the extra indexing curators establish as they follow the protocol will be helpful for researchers in disparate fields.

Conclusions: This project is of growing use for those studying animals as sentinels for human health. More research is needed on tailoring thesauri to help researchers find the animal sentinel literature more easily.

Medical Informatics Section and Molecular Biology and Genomics SIG

Sharing the Power (Part 2): Bioinformatics Education and the Library

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Contributed Paper Session

2:35 p.m.

A library-based bioinformatics educational program for students, researchers, and clinicians

Michele R. Tennant, bioinformatics librarian, Health Science Center Libraries and UF Genetics Institute, University of Florida–Gainesville

Objective: To describe a bioinformatics educational program at an academic health center library.

Methods: Case study: In the post-genomic era, researchers and clinicians will become even more reliant on genetics- and bioinformatics-related information resources. Several libraries based in academic medical centers have hired librarians and/or biologists to create bioinformatics educational programs and services for their clients. At the University of Florida's Health Science Center Libraries, bioinformatics/genetics-related courses and updates generally fall into four general categories: (1) course-integrated instruction: instruction in the use of National Center for Biotechnology Information and other Web-based resources integrated into the research and clinical curricula; (2) stand-alone courses: subject- or resource-specific courses developed for faculty, staff, graduate students, and clinicians—offered outside the curriculum, these courses cover a variety of databases and resources, including GenBank, BLAST, Online Mendelian Inheritance in Man, and GeneTests-GeneClinics; (3) for-credit courses: an advanced course for College of Medicine (COM) doctoral students, "Applications of Bioinformatics to Genetics," was developed in a partnership

between the library and the COM; and (4) updates at COM basic science department faculty meetings: provide information on bioinformatics resources and services.

Results: The program continues to grow. Since 2002/03, over 90 library patrons have attended at least 1 "bioinformatics/genetics" stand-alone course, with nearly 30% attending more than 1. Bioinformatics instruction is now integrated (at faculty request) into the first-year medical and junior honors curricula. All 4 COM genetics-related departments invite the bioinformatics librarian to speak to their faculty on a yearly basis, and the librarian was voted a joint appointment in 1 department. Bioinformatics questions directed to the librarian have increased. Survey results suggest the classes and services provided are bridging a knowledge gap for many of the library's patrons.

Conclusions: Libraries in academic health centers can provide useful genetics/bioinformatics information resources and services. Such library programs are especially beneficial when developed in partnership with the academic faculty and their associated programs.

2:55 p.m.

Building a community of bioinformatics practice through library education programs

Barrie E. Hayes, systems development librarian; **K.T.L. Vaughan,** education services librarian; and **Margaret E. Moore,** director, Planning; Health Sciences Library, University of North Carolina–Chapel Hill

Objective: To describe a health sciences library's process of building a bioinformatics community of practice for researchers, educators, and clinicians through an integrated educational program.

Methods: Program evaluation started with the construction of a program outcomes model, which shows the alignment of desired outcomes with indicators, outputs, activities, and resources. The library envisions a bioinformatics community, which values the library's resources and expertise, demonstrates knowledge management competencies, has ready access to resources and services, and collaborates with library staff. A previously reported bioinformatics planning and needs assessment suggested three strategies: face-to-face instruction, asynchronous communication, and educational partnerships.

Results: Outputs this year include a bioinformatics Website, email discussion list, forums, classes, consultations, online guides to resources, and educational partnerships. Forums led to requests for consultations, Web-based guides to resources, and classes. The Carolina Center for Genome Science features and links to the Health Sciences Library on their training page. Other library partners include the Curriculum for Bioinformatics and Computational Biology, Center for Bioinformatics, North Carolina Center for Genomics and Public Health, and School of Information and Library Science.

Conclusion: The University of North Carolina bioinformatics community is reacting positively to the library's educational programs and is beginning to recognize the library's value in building this emerging community.

3:15 p.m.

Building a national bioinformatics education program for library staff: design, results, and the future

Renata Geer, technical information specialist, National Center for Biotechnology Information, National Library of Medicine, Bethesda, MD

In the ten years since MLA's Molecular Biology and Genomics SIG was founded, library involvement in this new area of biology continues to increase. The training of library staff in the use of molecular biology concepts, databases, tools, and user needs provides the foundation for this growing involvement. This presentation describes the design and implementation of a national bioinformatics education program, originated at the National Center for Biotechnology Information, National Library of Medicine. The program design (1) takes into account a broad range of librarian backgrounds, from undergraduate degrees in humanities to doctorates in biology; (2) attempts to strike a balance between brevity and comprehensiveness, in order to be accessible for large numbers of librarians across the country, yet provide a practical, core set of knowledge and skills that can be applied at their institutions; and (3) focuses on actual user needs. The education program aims to assist and support medical libraries in establishing bioinformatics information services. The talk provides an overview of the structure and goals of both the introductory and advanced programs, as well as the size and nature of the audiences for each. It concludes by discussing how the training has been applied at various universities and what training goals lie ahead.

Public Health/Health Administration Section and Lesbian, Gay, Bisexual, and Transgendered Health Sciences Librarians SIG

The Power of National and International Health Initiatives

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Invited and Contributed Paper Session

2:35 p.m.

Healthy People 2010 in action: using national partnerships to address the needs of individuals with limb loss

Leslie J. Duncan, manager, Information Services, National Limb Loss Information Center, Amputee Coalition of America, Knoxville, TN

Objective: To describe the programs that the National Limb Loss Information Center (NLLIC) has developed that address health and well being among individuals experiencing limb loss, a goal of Healthy People 2010.

Methods: Narrative review: Few empirical data are available to describe the circumstances or consequences of limb loss or limb deficiency. About 26 of every 100,000 newborns have congenital limb deficiency; trauma-related amputations occur at a rate of 6.6 per 100,000, and amputations secondary to vascular disease account for the majority of limb loss (48.5 per 100,000). People who experience limb loss often express

concerns about the inadequacy of prostheses and the social isolation in conjunction with a relatively rare experience. These problems can eventually lead to chronic unemployment, poor quality of life, and increased disability. People with limb loss also experience increased health concerns and are more susceptible to developing secondary conditions. The principal goal of the NLLIC is to improve the quality of life and peer support of people with limb loss by providing information and participating in outreach activities to groups and allied agencies that address limb loss issues. The programs of the NLLIC include a national hotline, a Website, the Youth Activities Program, the National Peer Network, national consumer publications, and the NLLIC library catalog. With its national partners (e.g., ADA and the Office of Minority Health, among others) the NLLIC develops fact sheets, writes articles, participates in research studies, exhibits and presents at national conferences, and advocates at the federal level. These activities promote health and well-being among amputees.

Results: The NLLIC has seen increased requests for information from professional organizations, increased consumer referrals from our national partners, increased requests for presentations, increased willingness on the part of national organizations to work together on legislative issues, and increased requests to partner on research and program-based projects.

Conclusions: The national partnerships have proved beneficial in increasing awareness of health and well-being among individuals with a disability, specifically those experiencing limb loss, and a primary focus of Healthy People 2010.

2:55 p.m.

AZHealthInfo: improving Arizona's public health infrastructure

Patricia A. Auflick, outreach services librarian, Arizona Health Sciences Library, University of Arizona–Tucson; **Michael Kronenfeld, AHIP,** outreach services librarian, Learning Resources Center, A. T. Still University of the Health Sciences, Mesa, AZ; and **Jeanette C. McCray, AHIP,** deputy director, Arizona Health Sciences Library, University of Arizona–Tucson

Objective: To improve access to public health information for consumers, public health professionals, and community leaders and activists *and* to empower local librarians and public health officials to be responsible for the currency and inputting of local data.

Methods: Website development, training workshops, ongoing communication, partnership development.

Program Evaluation: Website statistics, number of public library and local health department Websites with a link to AZHealthInfo.org from their Websites, workshops, a half-page evaluation consisting of nine questions using a Likert scale.

Setting/Participants/Resources: Arizona is the sixth largest state in the United States. The Arizona Turning Point Project covers the fifteen counties of the state with partial funding coming from the state Turning Point Project and Library Services and Technology Act. Partners include the Turning Point Project, State Library, Arizona Local Health Officers Association, College of Public Health, Arizona Department of Health Services, and the Maricopa County Health Department.

Brief Description: AZHealthInfo is a Web-based resource to facilitate access to relevant consumer and public health information for citizens and the public health community of the state. It contains information and links to pertinent resources for each county, the state, and items of national and international interest. The project developed a mechanism for permitting local authorities to submit local content to ensure its long-term growth and development. Training, provided by the Arizona Health Sciences Library, demonstrates how this local information can be input. In addition, the trainers present information on a variety of topics such as consumer health, diabetes, and Spanish language resources.

Results: This project has brought together libraries and public health agencies—groups that have not traditionally worked with each other in the past—to foster an environment of collaboration to improve access to public health information. Enthusiasm for the project is widespread, but whether or not that enthusiasm translates into financial support for the project remains to be seen.

Conclusions: The project is opening the lines of communication between a variety of organizations, enabling the public and health providers to have easy access to consumer and public health information.

3:15 p.m.

The power to influence health policy

Anthony Silvestre, associate professor, Department of Infectious Diseases and Microbiology, University of Pittsburgh, Pittsburgh, PA

Librarians and professional library associations have had major impacts on the health of lesbian, gay, bisexual and transgender (LGBT) people and on the development of health policies. In some cases, decisions by individual librarians have made a substantial difference in the lives of LGBT people. Additionally, the formal support of the profession of the early LGBT movement provided credibility and resources when they were most difficult to get. This support continues in the face of ongoing political pressure. The recent congressional investigation of NIH's support of HIV and LGBT health research is the most recent and most publicized example of inappropriate political interference in the research process. The resulting dearth of LGBT research has negatively affected efforts to affect LGBT health policies and programs. The barriers to LGBT research arise from the lack of federal funding, inadequate resources to deal with all health disparities, the relative silence of our associations and schools, and lack of political will. The development of Healthy People 2010 and the Healthy People 2010 Companion Document for Lesbians, Gay, Bisexual, and Transgender (LGBT) Health illustrates the impact of politics on LGBT health policies. As such, it sheds light on the practical steps that can be taken to improve health policy in the future. Librarians and their colleagues in the wider research community have the power to make a difference in health policy.

Public Services Section

Influencing Change: Recharging the Roles of Reference and Public Services

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Contributed Paper Session

2:35 p.m.

Modifying the role of the reference librarian at the virtual desk

Sandra L. De Groote, AHIP, assistant information services librarian, Information Services, Library of the Health Sciences, University of Illinois–Chicago; **Josephine L. Dorsch, AHIP,** health sciences librarian, Library of the Health Sciences-Peoria, University of Illinois–Peoria; and Scott Collard, assistant reference librarian, and **Carol Scherrer, AHIP,** information services librarian, Information Services, Library of the Health Sciences, University of Illinois–Chicago

Objective: To examine how the various reference departments (health sciences, sciences, social sciences) at a multi-library university combined to create one service point in the virtual environment using a shared digital reference service. The study also documents the types of questions received through the service and the impact on the role of the reference librarian.

Methods: Content analysis: Email reference has traditionally been provided and handled by the individual reference departments at the University of Illinois-Chicago. A virtual reference management system was introduced centralizing the location where questions were submitted and viewed. A random sampling of questions submitted to the virtual reference service over an eight-month period was examined and coded to track the type of questions asked and the department answering the question. Coded information was analyzed to generate a statistical profile, and librarians were surveyed to elicit qualitative information. Questions were analyzed to determine overall use of the system, target audience participation; appropriateness of subject routing of questions, and adequacy of Web services and resources as currently delivered by the library.

Results: The reference departments contributed equally to answering the digital reference questions. The most commonly asked questions were related to library policies, library holdings, and finding information on a particular topic. Most subject-based questions were answered by the respective reference department while non-subject-based questions were answered equally by all reference departments. The subject breakdown of questions asked was 31% social sciences and humanities, 24% health sciences, 3% science, 22% library services, and 24% other. Seeing a broad range of questions from across disciplines gave librarians an increased understanding of user needs at the same time that distribution of non-subject-based questions among all reference departments improved efficiency.

Conclusions: Having a one-service point virtual reference desk is an opportunity for a multi-library university to improve efficiency and convenience of digital reference service. The single access service point relieves the patron from discerning the appropriate location to submit a question. The high percentage of questions related to library services and location of resources suggests areas of improvement for Web page design and instructional content.

2:55 p.m.

Representing the voice of the library patron in a digital world

Kathleen F. Bauer, librarian, Nursing and Reference Resources, Cushing/Whitney Medical Library, Yale University, New Haven, CT

Objective: To better understand how library patrons use SFX, a service providing links from research databases to full-text journals.

Methods: Prospective cohort study: In this observational usability study of fifteen library patrons at Yale University, subjects were presented with seven citations from a saved Ovid CINAHL and PsycINFO search and were asked in each case to locate the article, either online or in print. Subjects were asked to think aloud as they went through the steps of finding the actual article for each citation. One librarian acted as the interviewer, leading the subject through the citations, and a second librarian acted as the recorder, writing down the words and actions of the subject.

Results: Participants easily adapted to using SFX to find online or print articles. Participants universally liked successful links to full text. Twenty-three percent of the searches failed to uncover the desired article, usually due to SFX's inability to link directly to full text in some aggregations. Links that led to aggregations that required additional searching were considered confusing and caused participants to quit without finding full text for those citations 53% of the time. Additionally, 33% of participants found the ability to search the library's list of online journal titles confusing. Participants expressed frustration with any links that did not reliably lead them to full text.

Conclusions: This study showed that the benefit of possibly finding full text in some aggregations is outweighed by the frustration patrons may feel in searching in those resources or in finding dead ends (no full text). Because of this frustration, the library's SFX team decided to turn off SFX linking to some aggregations and identified improving the reliability of links as a high priority area.

3:15 p.m.

High voltage reference services: reinventing reference in the digital age

Gillian Goldsmith Mayman, head, Reference and Instruction; **Deborah Lauseng**, administrative associate, Reference and Instruction; and **Jonathan Koffel,** university library associate; Public Health Informatics Services and Access, University of Michigan–Ann Arbor

Objective: To reinvent reference services within the digital environment.

Methods: After decades of offering traditional reference services in a medium-sized public health library, the reference department has embraced the following goals: (1) Be proactive: Get out from behind the desk and go to where the patrons are. We met with faculty to discuss their training and

information needs, integrated library resources and training opportunities into the curriculum, and promoted reference resources through a variety of alternative venues. (2) Be relevant: Let patron needs determine services and collection decisions. We surveyed users and responded to the results by providing "on call" reference services, discarding obsolete guides to resources, and updating print and online reference collections. (3) Be digital: Reinvent the library Website as a primary service point. We instituted online access to all services, created extensive guides to reference resources, and began developing online training modules for all library workshops.

Results: Being proactive in our discussions with faculty has created new opportunities to provide curriculum-integrated reference services. However, marketing of reference services also created a new demand for very specific information that was not easily met. Patron expectations will need to be managed more precisely in the future. Providing services and resources that are relevant to our users has continued to be a top priority with additional resources being established for new courses and symposiums. The library's Website now more accurately mirrors and extends the services and resources that are offered in the physical library.

Conclusions: We have regained connections to our users that were lost in the digital environment. Additional opportunities to provide alternative reference services and to create experimental programs and marketing tools will be pursued.

3:35 p.m.

It's not about a desk

Joe Jaros, associate director; **Christine Foster, AHIP,** manager, Client Services; and **Martha Bedard, AHIP,** director; Medical Sciences Library, Texas A&M University–College Station

Objective: The process of moving from a traditional Circulation/Reference Desks model to a single service point staffed by paraprofessionals is challenging and affects many aspects of library services. We identify management issues and predictors of success.

Design: Case study.

Setting/Participants/Resources: The setting is an academic health sciences library primarily serving professional students, graduate students, faculty and researchers. Library staff spent two years planning and implementing the single service point concept.

Brief Description: At MLA '94 in San Antonio, Robert Braude, AHIP, FMLA, and Lucretia W. McClure, AHIP, FMLA, energetically debated "Removing/Replacing the Reference Librarian at the Reference Desk." Ten years later, many medical libraries consolidate user services (including reference) at a single service point (not called the Reference Desk). Libraries report varying success moving toward this model. This case study illustrates many issues facing libraries that try to make this significant change, including staffing, training, physical space, reorganization, workflow, impact on other departments, and user and staff satisfaction.

Results/Outcome: The library has a single service point staffed by paraprofessionals who answer reference questions, instruct users, and consult with reference librarians as needed. After consolidation of the service, both the Circulation Desk and the Reference Desk were removed and staff designed the new service point.

Evaluation Method: Indicators of success include: single service point staffed by paraprofessionals, pre and post-implementation service desk statistics, staffing costs.

Research Section

Evidence-Based Librarianship: Step-by-Step From Those Who Have Done It

Tuesday, May 25, 2004, 2:30 p.m.–4:00 p.m.

Invited Speaker Session

2:35 p.m.

The randomized controlled trial: not such a daunting task

Jonathan Eldredge, AHIP, director, Health Sciences Library, University of New Mexico–Albuquerque

Objectives: To describe the essential components of the randomized controlled trial (RCT) design and to illustrate its applications to health sciences librarianship.

Methods: Narrative review supported to a limited extent with PubMed and library literature database searches consistent with specific search parameters. More systematic methods, including handsearching of specific journals, to identify health sciences librarianship RCTs in targeted health sciences librarianship journals.

Discussion: Some selected examples of RCTs in the health sciences illustrate the adaptations of this experimental design for answering questions of possible relevance to health sciences librarians. RCTs are far more straightforward research designs than suggested by their apparent mystique. The author offers several practical strategies for controlling bias in library and informatics applications of the RCT. He also welcomes the electronic era for the many opportunities to utilize the blinding aspects of RCTs. The kinds of RCTs in health sciences librarianship represent a limited number of subject domains such as education. This limited scope offers both advantages and disadvantages for making evidence-based librarianship (EBL) a reality.

Conclusion: The RCT design offers the potential to answer far more EBL questions than have been addressed using RCTs to date. Librarians need only extend their horizons through use of the versatile RCT design into new subject domains to facilitate making EBL a reality.

2:55 p.m.

Planning and implementing a systematic review of the literature

Gary Byrd, director and adjunct associate professor, Health Sciences Library, University of New York–Buffalo

The strategies used to complete a recently published *Journal of the Medical Library Association* systematic review of studies evaluating the effectiveness of clinical librarianship programs will be used to illustrate the process of conducting systematic reviews to support evidence-based health sciences

librarianship. This presentation will focus on the particular challenges of conducting these reviews in a professional literature that uses primarily descriptive research methods rather than the comparative and analytically quantitative studies used to support systematic reviews of the medical literature.

3:15 p.m.

The Ten Thousand Questions project an attempt to address the "consumer vocabulary problem"

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

The focus of Professor Smith's talk is the Ten Thousand Questions project an attempt to address the "consumer vocabulary problem." This is the potential mismatch between terms used by health care professionals and those used by everyone else: patients, those who care about patients, and healthy people in need of health-related information. It relies on an unusual but expressive source of data: questions submitted to Web-based discussion groups. In this talk, Professor Smith will discuss her study design, qualitative analysis techniques, and the challenges of doing research in a virtual domain.

3:35 p.m.

Learning from LibQUAL+: what three years of data teaches us

James Shedlock, AHIP, director, and Linda Walton, associate director, Galter Health Sciences Library, Northwestern University, Chicago, IL

The LibQUAL+ survey has proven to be a useful tool for measuring the quality of a library's services. Developed at Texas A&M University in conjunction with the Association of Research Libraries, the LibQUAL+ survey is a total market instrument that responds to the need for accountability and addresses the elusive goal of understanding how library users perceive the quality of the services they receive. Used in conjunction with traditional quantitative data, the LibQUAL+ survey results provide a fuller picture of the library's role within its environment. Since 2000, the Galter Library has participated in the LibQUAL+ project for three consecutive years. This presentation will provide background on the LibQUAL+ survey, preparation needed to use the survey and a close examination of available data. Of note is to see how the LibQUAL+ results can be used for peer comparison and how the survey can be used to detect changes in a library's service program.

POSTER SESSION 1

Monday, May 24, 2004, 2:00 p.m.–3:30 p.m.

MP01

Assessing medical student informatics competencies

Brynn E. Mays, assistant director, Education Services, and **Jane L. Blumenthal, AHIP,** director and assistant dean, Knowledge Management, Dahlgren Memorial Library; **Jeffrey M. Weinfeld,** assistant professor, Department of Family Medicine; and **Marcus A. Banks, AHIP,** NLM associate fellow, and **Janette Shaffer,** education coordinator, Dahlgren Memorial Library; Georgetown University Medical Center, Washington, DC

Objective: We collaborated with medical school faculty to develop a curriculum-integrated posttest model to assess informatics competencies in the medical school curriculum.

Methods: An interdepartmental informatics curriculum committee was formed to review in which courses informatics concepts were taught throughout the four-year curriculum and to draft updated learning objectives. Through this faculty-librarian collaboration, we identified one preclinical course and one clinical clerkship in which to pilot an instructional intervention and tailored assignment for assessing student competencies. Faculty and librarians worked together to identify outcomes and indicators, create relevant assignments, and teach students information retrieval and information management skills.

Results: In the "Introduction to Health Care" course, all first-year students completed a community health informatics project. Twenty-five percent attended a voluntary library help session or sought librarian assistance in finding county-level data. Qualitative observation of 39 presentations indicated that all 39 students found information relevant to their assignment. Only 44% clearly documented their sources, making it difficult to objectively assess the quality of the information. In the third-year family medicine clerkship, faculty-librarian teams taught evidence-based medicine workshops. Students completed a clinical question worksheet and documented search strategies. During this pilot phase, the worksheets were not graded. Student feedback provided additional insights.

Conclusions: Faculty-librarian collaboration aided the development of appropriate, relevant assignments for preclinical and clinical education. Coteaching by faculty-librarian teams emphasized the integrated nature of informatics competencies and enhanced the teaching experience. More work is needed to develop appropriate assessment strategies.

MP02

Power of improved practice: taking information management education to the next level

Jeanne Sadlik, coordinator, Research & Education Services, and **Logan Ludwig,** associate dean, Health Sciences Library/Media Services/Telemedicine, Loyola Health Sciences Library, Stritch School of Medicine, Loyola University Chicago, Maywood, IL

Objective: To integrate knowledge-based information into the curriculum by using an electronic learning management system and to demonstrate students' competencies in searching databases for evidence-based-medicine literature.

Methods: Setting: Loyola University Chicago Stritch School of Medicine (SSOM) Maywood, Illinois

Population: 130 third-year medical students

Project Description: Since 1995, librarians held one-hour sessions with all third-year medical students at the start of clerkship rotations in July. In these sessions, students were taught research techniques necessary to identify evidence-based-medicine (EBM) literature. This class focused on teaching the students to use logical, analytical thinking combined with advanced searching skills to search MEDLINE. These skills enable the students to search the literature and critically evaluate articles identified to support their clinical decisions. In 2003, the librarians developed a computer-based learning (CBL) module, "Searching for Evidence-Based-Medicine Literature," to take the place of the instructor-led sessions. The CBL consisted of thirty-six slides and a ten-question posttest (random questions from a pool of 20) followed by survey questions. This module supports SSOM's move toward competency-based education. The data collected from the completion of the CBL demonstrate the competencies of the students in searching the literature for EBM information. All third-year students were notified by email of the need to complete the CBL by the end of July. Instructions for accessing the system were included.

Results: One hundred thirty third-year medical students completed the evidence-based medicine CBL module. The average test score was 90%; 124 of the 130 students passed the posttest on the first try; 23 students attempted to complete the posttest without looking at the course material. Out of these 23, 20 passed the test on the first attempt. Sixty-three percent of the students found the information presented helpful in understanding how to search for EBM literature; 84% preferred completing the CBL module to an instructor-led class.

Conclusion: This pilot study showed that using a CBL module was an effective way to teach research techniques necessary to identify EBM literature. Because of the success of this program, in the future, all third-year students will be required to complete the CBL module.

MP03

Library support of the service-learning curriculum in an academic medical center

Marcus A. Banks, AHIP, associate fellow, Dahlgren Memorial Library, and **Donna D. Cameron,** service-learning director, Department of Family Medicine, Georgetown University Medical Center, Washington, DC

Objective: As part of the "Introduction to Health Care" (IHC) course, self-selected first-year medical students participate in a service-based team project. Teams of students conduct health education and outreach at selected community sites, and faculty team leaders relate their experiences to course concepts. This project evaluated how the medical center library could improve its support of this program.

Methods: As initial background for the project, a library fellow met with the service-learning director to determine the demographics and health profiles of the various locations visited by the students. The fellow also met with the IHC course director to learn his perspective regarding how the library could support this project. Soon after the students began conducting site visits, the fellow and service-learning director met with them to learn about additional resources that would be useful. We then observed the final session conducted by students at selected community sites, in order to gauge how they incorporated health information into their instruction and to ascertain how community members felt about the quality of the information they received. The perspectives of faculty, students, and community members helped to inform the library's collection of culturally appropriate and engaging consumer health resources.

Results: Once a week for six weeks of the spring semester, a team of eight students met with eight residents of a group home for teenage mothers. The library fellow attended the first and last of these sessions, in order to promote the library as a useful resource for consumer health information. During this period, two of the eight students sought the fellow's assistance. Based upon their questions, the fellow informed all students about relevant resources. At the final session, students and mothers created a bulletin board of health information at the residential facility, which included information provided by the fellow.

Conclusions: This was a good beginning to a collaboration that should expand. Future steps will include creation of a Web page of links to consumer health resources. Because the preparation for community service visits occurs during fall semester, it would be preferable for a librarian to build rapport with students then.

MP04

Internet Web-based materials in family medicine education: a national survey

Helen G. Mayo, manager, Campus Outreach, UT Southwestern Library; **Cassie L. Murphey-Cullen,** assistant professor; **Alice K. Marcee,** faculty associate; and **Gregory W. Schneider,** assistant professor; UT Southwestern Family Practice Residency Program; **Richard V. King,** associate professor, UT Southwestern Biomedical Communications; and **Robert D. Frey,** assistant professor, UT Southwestern Family Practice Residency Program; University of Texas Southwestern Medical Center–Dallas

Objective: To determine family residents' actual experience with and desired exposure to computers, personal digital assistants (PDAs), the Internet, and Web-based information for clinical and educational activities.

Methods: Programs listed in the American Academy of Family Physicians 2002 directory of Family Practice Residency Programs were divided into five categories based on affiliation and structure of the residency program. The 456 programs were community based (CB), community based and medical school affiliated (CBMSAF), community based and medical school administered (CBMSAD), medical school based (MS), and military. Random samples of programs within each of the first four categories were selected to participate in the study. Military programs were excluded. A total of 312 programs were selected: CB (24), CBMSAF (159), CBMSAD (73), and MS (56). A survey packet containing a 14-item questionnaire for each resident and a letter of explanation regarding the study was mailed to 312 randomly selected programs. Residents reported on their own access to computers and PDAs at home and in the office, their use of the Internet for personal use and clinical information, and their preferences for accessing information currently provided at teaching conferences, for national board exam preparation, and at clinical point-of-care.

Results: The CBMSAF returned 600 surveys (49.3%); CD returned 60 surveys (4.8%); CBMSAD returned 300 surveys (25.5%); MS returned 240 surveys (20.4%). For statistical analysis, the CBMSAF and CB were combined into "community centric," and the CBMSAD and MS were combined into "medical school centric" program types. Most residents have access to the Internet, a home computer, and a PDA. There is a statistically significant difference in self-reported Web search skills between community centric and medical school centric residents, but this difference disappears when residents are asked if they are able to find clinically useful information during their Web searches.

Conclusion: Family practice residents' access to the Internet and computer-based information is very well established. There is a disconnect between the number residents that report advanced Web search skills and those who report finding clinically useful information. This has implications for teaching residents how to better use Internet-based resources.

MP05

Empowering preceptors for teaching with technology: a change in practice

Brenda Seago, AHIP, director, Computer Based Instruction Lab, and **Judy Gary,** educational coordinator, Department of Family Practice, School of Medicine; **Shannon Jones,** NLM second year associate fellow, Tompkins-McCaw Library; **Dan Han,** info tech analyst, Computer Based Instruction Lab, and **Chris Stephens,** director, Applications Development, Office of Faculty and Instructional Development, School of Medicine; **Indra Kancitis,** Foundations of Clinical Medicine coordinator, Department of Pediatrics; and **Rita Willett,** director, Foundations of Clinical Medicine Course; Virginia Commonwealth University–Richmond

Purpose: This project assesses the outcomes of integrating the practical use of technology in a community practice setting on physician-preceptor teaching at Virginia Commonwealth University (VCU).

Methods: The VCU School of Medicine distributed 10 IBM ThinkPads, funded by the VCU Faculty Laptop Initiative, to physician-preceptors to assist them with teaching. Faculty from the Foundations of Clinical Medicine (FCM) course, the Computer Based Instruction Lab, and Tompkins-McCaw Library collaborated to identify preceptors; provide training in computer use, online curriculum, and library resources for evidence-based medicine; and to deliver laptops to preceptors. Ten preceptors were selected from over 300 primary care physicians who have students in their offices during the students first 2 years of medical school. Participation was voluntary and required access to high speed Internet in the

home or office. An email discussion list and bulletin board were established to facilitate communication with FCM staff and preceptors to improve medical student teaching. Also, a preceptor Website was developed to support the ongoing exchange of information between community preceptors and the FCM staff.

Results: During December 2003 and January 2004, the ten laptops were delivered to either the physician's home or office and training was provided in PubMed, StatRef, Micromedex, School of Medicine online curricula, and medical resources on the Internet. Preceptors were introduced to the email discussion list and discussion forum. The preceptor Website debuted after the training and includes teaching guides for M-I and M-II students, links to relevant teaching resources and the electronic bulletin board, and announcements about upcoming programs.

Conclusions: A focus group was conducted at a clinical skills workshop on campus. Preceptors rated the training an A+. The email discussion list and Web-based discussion forum were ranked valuable with potential, although neither had been used extensively. The Website also received positive feedback; the preceptors appreciated knowing the resources were available.

MP06

Multidisciplinary medical case study development for first-year medical students

Dan Kipnis, education services librarian; **Tony Frisby,** director, Education Services; and **Liz Mikita,** education services librarian; Academic Information Services and Research, Thomas Jefferson University, Philadelphia, PA

Objective: To teach medical informatics skills to 232 first-year medical students using three online medical case studies developed with the collaboration of librarians, physicians, and instructional designers.

Methods: The first formal medical informatics class at Jefferson Medical College was created in 1987. Initially a traditional combination of lectures and hands-on workshops, the course was redesigned in 1996 to be a single two-hour lecture and 9 self-paced computer-based learning hours. In 2003 the Jefferson Medical College curriculum was changed from a traditional core study in the basic sciences during the first year to a system-based model. At this time, many free-standing courses such as medical informatics were integrated into a new course, "Medical Practice for the 21st Century." The content presented in the new course included medical informatics, medical ethics and humanities, biostatistics, health policy, and clinical history and examination skills. Each of these courses presented relevant content in synch with the body system functions of the new combined gross anatomy, histology, biochemistry, and physiology course, "Human Form and Development." This poster will describe the history of the medical informatics course and the process of designing the case studies to fit into the new course management system, and will review the experiences of the librarians involved.

Results: The following proved to be challenges:

- Finding physicians to develop credible case studies (we also got help from a nurse and dietician)
- Adapting the case studies to a commercial course management system
- Grading answers from 232 medical students
- Providing personalized feedback to at least 3 out of 14 questions per student
- Dealing with technical issues
- Developing questions/answers that could assess hard to measure search strategies and skills (and be graded automatically)
- Taking into account that databases are a moving target (search results can change from day to day)

Conclusions: Recruit medical staff to help develop realistic case studies, minimize ambiguity in test questions, and construct meaningful assessments given the structure and limitations of a course management system. Develop exercises that build information literacy skills in a method that encourages self-directed learning but allows for individualized attention when necessary.

MP07

Combined power: integration of medical informatics curriculum into problem-based learning course for first-year medical students.

Laura Abate, electronic resources & instructional librarian; **Anne Linton, AHIP,** director; and **Patricia Wilson,** associate director, Public Services; Himmelfarb Health Sciences Library, The George Washington University, Washington, DC

Objective: Integration and restructuring of medical informatics and problem-based learning curricula to improve resource selection and search skills, to boost recall of informatics topics, to provide point-of-use learning and instruction, and to enhance student experience.

Methods: Librarians developed and taught "Introduction to Medical Informatics," a required pass/fail course to first-year medical students, through the 2002/03 school year. In 2003/04, "Introduction to Medical Informatics" was renamed "PBL Informatics" and integrated with "Problem-Based Learning" in which students research and discuss individual medical cases. Students completed an online curriculum including tasks and quizzes and demonstrated proficiency with specific computer applications. Librarians were matched with individual PBL groups, acted as advisors to students in their research, and guided students through PBL's informatics-related curriculum. Increased librarian participation in PBL groups was initiated in part by student feedback requesting closer integration. To restructure the medical informatics online curriculum, the original twelve sessions were reduced to six through consolidation and elimination. Each of the six sessions contains a written lecture and quiz and is matched with a PBL case. As students progress through a PBL case, informatics issues arise that are mirrored in the online informatics curriculum. In addition, at two of the four group meetings per case, librarians make brief (5–10 minutes) presentations to their PBL groups on topics drawn from the informatics curriculum and the PBL case.

Results: The success of "PBL Informatics" relies on additional librarian time and student contact over previous years, closer collaboration with the PBL faculty to rewrite PBL cases to include informatics topics, and increased interaction with each group's faculty tutor. Positive feedback has been received from

students, course directors, faculty tutors, and faculty librarians. Student selection of information resources improved over the previous year, and students consistently cited high-quality resources in their papers and presentations.

Conclusions: The integration of the medical informatics and PBL curricula has been successful. Future efforts will likely involve continued rewriting and restructuring of PBL cases to incorporate informatics concepts and to hone information-seeking and evaluation skills.

MP08

Improved practice: distributed library instruction to nursing students

Kate Finkelstein, outreach librarian, Dahlgren Memorial Library, Georgetown University Medical Center, Washington, DC, and **Marie Reidelbach,** associate director, User Services, and associate professor, and **Alison Bobal,** reference/digital services librarian, McGoogan Library of Medicine, University of Nebraska Medical Center–Omaha

Objectives: This poster will describe the process by which an academic health sciences library created digital video tutorials and distributed them via CD-ROM. This poster will evaluate:

- process of creating the CDs
- effectiveness of the instructional digital videos
- content presented in each learning module
- whether the library should continue this mode of user instruction

Methods: This academic health sciences library serves an increasing number of distance students, most of whom enroll through the university's College of Nursing. Most of these students visit the campus only once each semester during course orientation, making scarce opportunities for effective library instruction. In August 2003, the library distributed over ninety CDs containing nine screen-captured tutorials to all College of Nursing distance students. This group included all students enrolled in the RN to BSN and graduate/doctoral programs, as well as BSN students taking online courses. The library created a survey instrument to assess the perceived usefulness and effectiveness of this mode of instruction. The library contacted forty-eight students who received the CDs and asked them to anonymously complete the online survey. Of the forty-eight surveys distributed, twenty-seven were returned (56%) and of those twenty-seven responses, sixteen students used and evaluated the CD. All user feedback was positive regarding the usefulness of the CD. About half of the students answered that, in addition to receiving the CD, they would have also liked a hands-on instructional session. Respondents commented that the CD was helpful throughout the semester whenever they needed to do library research. Based on the survey comments, the library will continue to distribute similar CDs, in addition to on-campus instruction sessions during orientation. Additionally, the library will place the video tutorials online for wider distribution of the modules.

MP09

"Having an information problem? We'll help you lick it!" The Library Survivor Tour

Marilyn A. Rosen, biomedical information specialist, and **Angela Dixon,** head, Collection Management, and biomedical information specialist, Edward G. Miner library, University of Rochester Medical Center, Rochester, NY

Purpose: This poster will present our redesign of the orientation week tour for first-year medical students, in which we incorporated the needs of various styles of learners.

Setting/Participants/Resources: The tour was conducted in an academic health sciences library serving a school of medicine and dentistry, a school of nursing, and a 690-bed hospital. Every August, all first-year medical students are required to tour the library.

Brief Description: Two members of the reference staff and the educational coordinator developed a scavenger hunt with the reality game show theme of *Survivor.* The medical students named their teams, then proceeded to answer thirteen questions within twenty minutes. They "hunted" in a variety of library locations and in numerous electronic resources. Usability questions on our new Website were also included. The tour ended with a wrap-up review session, in which every student was a winner. Each student received a library mug filled with candy and a gift certificate. The winning teams were awarded a Medical School Survival Kit.

Results/Outcome: The students became familiar with the library layout, resources, and services in an upbeat, interactive, lively atmosphere. Librarians and staff were viewed as more approachable (who wouldn't smile at a person wearing a pith helmet?).

Evaluation Method: A survey was emailed after the tour, outlining its goals and asking the students if they felt the goals were met. Comments received indicated the students' enthusiasm for, and appreciation of, the tour.

MP10

Information literacy for med I students: testing their knowledge and our effectiveness

Melissa L. Just, AHIP, information specialist, and **Eileen Eandi,** information specialist, Norris Medical Library, University of Southern California–Los Angeles

Objective: To determine medical students' levels of information literacy. To provide an information literacy instructional session. To deliver a posttest to determine the effectiveness of instruction.

Methods: The University of Southern California's (USC's) Norris Medical Library has participated in the Keck School of Medicine's student orientation for years by providing MEDLINE instruction. In 2000, the school instituted a case-based learning model, and the library was invited to participate more fully—first, by adding a yearlong, course-integrated MEDLINE searching assignment, then by adding more library training time to orientation week. The library decided to add a general information literacy (IL) component to the orientation session but did not have any concrete knowledge of the incoming students' skills. Librarians developed a course to teach students basic IL skills needed for becoming more efficient and effective self-directed learners. A test was developed to administer as both a pre- and posttest. The pretest determined students' IL skills before the course. The posttest determined what knowledge students gained during the class

and served as a measure of course effectiveness. Also, students were asked to rate the quality of the course based on two measures: (1) percentage of content already known, and (2) helpfulness of content. This poster summarizes the course content, presents results of the pre- and posttests, addresses students' satisfaction, and draws conclusions about the future of the course.

Results: In 2003, the students scored an average of 80.1% on the pretest, suggesting that they entered medical school with a solid understanding of basic IL. After the sessions, the average score was 93.4%. Although the overall scores increased (percent change = 16.6%), the scores on two of the questions decreased, suggesting the students "unlearned" some information during the class. Students self-reported that they already knew an average of 62.6% of course content (considerably lower than the pretest suggested), and 75.0% reported that the information session was helpful.

Conclusions: The library will continue to offer the orientation session but focus on USC-specific resources, rather than reviewing general information literacy. Instructors will review their teaching practices to ensure that all class material is presented clearly.

MP11

The Clinical Connections Program: a chance to seize the power and profit from collaboration

Karen V. Knight, AHIP, medical education liaison; **Gabriel R. Rios,** assistant director, Information Services and Technology; **Andrea S. Horne,** learning resources manager; **Elaine May Attridge, AHIP,** nursing and clinical liaison; and **Gretchen Naisawald Arnold, AHIP,** associate director, Library Operations, Claude Moore Health Sciences Library, University of Virginia Health System–Charlottesville

Objective: The School of Medicine's Clinical Connections Program is an opportunity for third-year medical students to meet several times a year for full day discussions around a selected clinical topic. In 2002 and 2003, the Health Sciences Library was invited to develop a Clinical Connections Day around the theme of information technology. This collaboration has powered new beneficial library connections.

Methods: The Clinical Connections Program runs throughout the third-year, providing students with a continuing medical education type experience of large group presentations and small group workshops around topics of clinical interest. For the past two years, the library's program "Medical Information Technology: New Tools for the Bedside and Beyond" has occurred first in the year-long series and provides the medical students with an opportunity to acquire a practical introduction to new information technologies and issues surrounding their use in health care that will be pertinent in their clinical experiences. This poster will elaborate on the power of process improvement from year one to year two based on the changes made to the library's Clinical Connections Day from student evaluation data and the many benefits that derived from the library's involvement.

Results: The student evaluations from the first year, while good, reflected the need for some changes. We responded to student's feedback while planning the second year's program. The major changes included an increased focus on clinically relevant information technologies that appealed to the student's "here and now survival mode" and pulling in residents and clinicians to facilitate small group case-based work with personal digital assistants (PDAs). These changes resulted in an eleven percentage point improvement in evaluations from the second year. Another plus for the library was the ability to insert point of need training on PDAs, Micromedex, and evidence-based medicine searching into the curriculum.

Conclusions: This unique experience provided the library with an opportunity to collaborate with other departments and faculty members in the health system who are working to develop and implement information management systems. In addition, the sessions have provided greater time for library-related training in the student's third year.

MP12

Power of the nursing shortage

Keydi M. Boss, librarian, Bartholomew Medial Library, Holy Name Hospital, Teaneck, NJ

Objective: To acquire new computers for the School of Nursing Library.

Methods: The School of Nursing Library used the power of the nursing shortage to justify the acquisition of a new software package and subsequently replaced all the computers in the library.

Results: Prior to the acquisition of the Learning Systems by Meds Publishing, the library had fifteen computers. Three were not working at all. The remainder was at maximum capacity and had no available memory or hard drive space for new programs. Only three of the computers were Internet accessible. My poster will illustrate how the acquisition of the Learning Systems has made an impact on our nursing students' test taking success and has enabled me to replace all of the library's computers and acquire an additional network computer.

Conclusion: Technology upgrades are expensive. The School of Nursing library was in competition with other departments for monies to support an upgrade. I seized the power of the nursing shortage to acquire Learning Systems that provided the justification for upgrading our computers.

MP13

Withdrawn

MP14

End user empowerment: selecting and integrating a clinical electronic reference based on clinician choice: the numbers speak volumes

Terrie R. Wheeler, library director, Library and Medical Media, VA Pittsburgh Healthcare System, Pittsburgh, PA; **Mary E. Nourse, AHIP,** library director, Medical Library, Erie VA Medical Center, Erie, PA; and **Robert S. Lyle,** library director, Medical Library, Philadelphia VA Medical Center, Philadelphia, PA

Objective: To identify an electronic resource that would synthesize the most current evidence-based medical practices available and is designed so the busy clinician could intuitively locate specific answers to queries in a few clicks while seeing patients. Studies show that clinical questions arise for

clinicians while actively seeing patients, yet nearly all go unanswered because of time and resource limits.

Methods: In 2000, a survey was sent to all primary care clinicians in this health care network to identify their primary source of information. Of 203 surveys sent, 119 were returned, a 59% response rate. Of those who responded, 45% relied most heavily on textbooks, 13% relied most heavily on journals, and 28% relied most heavily on electronic resources for their primary source of clinical information. No uniform electronic products had been deployed prior to this survey. This same survey asked what electronic products clinicians used most, if they used electronic products. We learned that providers preferred the use of UpToDate. After an evaluation of this product, it was deployed in mid-2001 and integrated into the electronic medical record throughout our network, for easy availability when clinicians are seeing patients. Our hypothesis is that this intervention will meet some clinical information needs.

Results: Utilization of UpToDate by ten medical centers was monitored weekly by number of access sessions and unique users. Data demonstrate an overall incremental increase in UpToDate usage in VISN 4 over a three-year period from 2001–2003. A total of 65,060 clinical questions were answered at the point of care. We hypothesize several reasons for the steadily increased usage:

1. Accessibility: EMR GUI toolbar, desktops, Web pages
2. Physician champions
3. Increasingly sophisticated providers
4. Intuitive interface; requiring minimal clicks to access information sought
5. Timeliness: updated regularly
6. Improved speed of WAN
7. Integration of knowledge-based information into daily patient care
8. Increasingly sophisticated patient population

Conclusions: This project was successful because it integrated succinct and intuitive knowledge-based information into the EMR, affording the provider the opportunity to incorporate evidence-based medical literature into real-time patient care situations and answering the 70% of questions the literature showed would go unanswered previous to this intervention.

MP15

Seizing the power of collaboration and partnership in educating the 21st century nurses

Robert M. Joven, information and education services librarian, Lyman Maynard Stowe Library, University of Connecticut Health Center–Farmington

Objective: This poster will describe the efforts of the library to educate the nurses of the University of Connecticut Health Center in nursing informatics. Turn out for library classes has been low. Among the reasons indicated were staff shortages, too busy, and simply lack of familiarity with the importance and usefulness of these classes. To increase interest, the librarian is now collaborating with different departments in the hospital to encourage the nurses to attend these valuable classes and workshops.

Methods: It has been determined that improvement in marketing is urgently needed. The library realized a need to partner with other departments in the hospital to succeed. Several steps have been taken. A librarian assigned as a liaison to the nursing department conducted a series of meetings with several nurse managers on the importance of informatics. The liaison is also partnering with the Continuing Education (CE) Department to encourage the addition of library classes as part of CE classes for the nurses. The librarian is also working hand in hand with Organization & Staff Development to promote these classes. The librarian, the CE department, a member of Organization & Staff Development, and several nurse managers will work together closely to succeed in this venture. Expected results from these efforts include increased interest and awareness in informatics as well as improved attendance in library workshops and classes.

Results: As a result of various collaborations, the librarian has been appointed member of several hospital-wide committees Two classes are now offered monthly, and provide nurses 1.2 contact hours per class. Since the project began, there are now twice as many attendees per class. Follow-up surveys are conducted one month after the class to determine improvement in their information-seeking behavior. An overwhelming 98% of respondents said their searching skills have improved tremendously, and they are now aware of the importance of such a skill.

Conclusions: The efforts provided a great way for the librarian to meet with other administrators in the hospital. It also provides greater visibility to the library. More importantly, attendance to the classes has doubled. The interest and awareness level has increased.

MP16

Students find power in their palm: personal digital assistants in a clinical rotation

Jeanne Marie Le Ber, education librarian, Education Services; **Nancy T. Lombardo,** systems librarian; **John Bramble,** outreach librarian, Outreach Services; Eccles Health Sciences Library; and **Christopher Maloney,** assistant professor, Pediatrics; University of Utah–Salt Lake City

Objective: The academic health sciences library introduced the use of handheld devices into the third-year medical school curriculum. One important role of the library is to advocate the implementation of current technologies. In order to accomplish this goal, the library partners with academic units to find practical applications for these technologies. This project integrates wireless Palm Tungsten C personal digital assistants (PDAs) into a third-year clinical rotation.

Methods: Students are issued a Palm device for a six-week pediatric rotation. Library faculty provide instruction on basic functionality and clinical applications. In weeks one through three, students learn organizational features, installation processes, document conversion, and medically related applications. After the first session, students present and teach the use of clinical applications to their peers. The final sessions are devoted to literature evaluation using evidence-based applications on the device. For example, using the EBM Calculator, students are taught how to analyze journal article statistics and determine the validity of the research. Through

this course, students learn the value of new technologies such as handheld devices and continue to develop their critical evaluation skills.

MP17

Continuing education as a catalyst for interprofessional collaboration

Margaret Allen, AHIP, library consultant, Peg Allen Library Consultant, Stratford, WI; **Susan Jacobs,** health sciences librarian, Bobst Library, New York University–New York; **June Levy,** managing director, Glendale Adventist Medical Center Library, Cinahl Information Systems, Glendale, CA; **Susan Pierce,** associate professor, Nursing, College of Nursing, Northwestern State University, Shreveport, LA; **Diane Pravikoff,** director, Research, and professional liaison, Research Committee, Interagency Council on Information Resources for Nursing, Cinahl Information Systems, Glendale, CA; and **Annelle Tanner**, fetal and infant mortality review coordinator and adjunct professor, Health Care Information Management, Office of Public Health Region 6, Northwestern State University College of Nursing, Alexandria, LA

Objective: The purpose of the "Evidence-Based Nursing Practice Symposium" held in May 2003 was to bring health science librarians and nurses together to discuss the needs, tools, and solutions for improving nurses' utilization of information resources for evidenced-based practice. The symposium was cosponsored by an MLA section and the Interagency Council on Information Resources for Nursing (ICIRN).

Methods: The symposium included:

- Nurses' knowledge-based information needs: invited nurse and librarian speakers
- Tools for evidence-based nursing practice: choice of breakout sessions on searching, systematic reviews, and electronic resources including personal digital assistant (PDAs).
- What works: new directions for facilitating evidence-based nursing practice: six contributed papers from clinical and academic settings
- Electronic posters
- Small group discussion/reports regarding issues and recommendations

The program was evaluated using the following tools:

1. Modified satisfaction form based on standard MLA and nursing evaluation forms.
2. Posttest for identifying program strengths and setting objectives, action goals for follow-up in participants' organizations.
3. Six-month follow-up survey.

The poster will feature the evaluation results: did this continuing education make a difference? Members of the planning committee from ICIRN are continuing to work to offer similar programs at future library and nursing meetings.

Results: Participants included sixty-six paid registrations for librarians and nurses, plus complimentary registrations including most of the fifteen presenters. While there were considerably more librarians than nurses, all of the discussion groups included nurses. Evaluations completed by forty-nine librarians and nine nurses on the day of the symposium indicated high satisfaction with the symposium content. Participants identified specific ways that they planned to incorporate learning into their professional practice. The follow-up survey was completed by twenty-six librarians and one nurse. The greatest reported changes were in the areas of increased utilization of electronic resources and improved searching.

Conclusions: Continuing education can be a catalyst for change. Similar programs should be offered in conjunction with national nursing conferences, as well as local conferences with a well-defined plan for marketing to both audiences. Future offerings and follow-up should be more focused on the content identified in participants' plans for change.

MP18

Clinical librarianship in an internal medicine residency program: answering clinical questions to support patient care

Laurie J. Schwing, librarian, Library Services, and **Elizabeth Coldsmith, AHIP,** librarian, Library Services, PinnacleHealth System, Harrisburg, PA

Objective: The poster will illustrate a relatively new, collaborative approach to residency education and patient care by having a librarian attend morning report. The librarian functions outside the traditional library environment and provides real-time reference services while demonstrating search and retrieval skills.

Methods: A questionnaire will assess the attitudes of faculty and residents regarding the involvement of a librarian in morning report. Queries will be made as to whether the collaboration improves patient care, affects clinical decision making, enhances access to information, and teaches about information resources and the capabilities of a medical librarian. A model has been put into practice whereby the librarian uses a networked laptop to retrieve answers to clinical questions as they arise, and projects the findings onto a screen using an LCD projector, thereby providing relevant information at the highest possible level of evidence. Under the guidance of the program director, the librarian becomes an integral part of the patient care team during morning report. Being present for the discussion of the case from chief complaint to history/physical to viewing CT scan films is the ultimate reference interview. Combining the librarian's research skills with the medical knowledge of residents and faculty achieves an informed, updated approach to patient care and may help to avoid medical errors. Residents are able to access resources demonstrated during report from a specific intranet page where citations or appropriate hyperlinks are placed by noontime the same day.

Results: Twenty-six internal medicine residents completed a Likert scale survey after 18 months of having a librarian attend morning report weekly. Two broad categories of measurement included in the survey were "Information Behavior" and "Librarians and Information"; these were not labeled on the survey so as not to influence answers to the questions. As to

information behavior of residents, 82% of residents had clinical questions 3 or more times weekly and 83% of that group pursued answers frequently. Seventy percent found answers to their questions. Of those answers found, 58% influenced patient care decisions "much" or "a great deal" (the two highest levels offered on the Likert scale). We found that only 40% of the residents used online clinical tools and databases including PDA resources to answer their questions (excluding the open Web). With regard to librarians, 40% of this group of residents asked librarians for help frequently and 86% found librarians to be "very helpful" (the highest level on the Likert scale) in general. Ninety-one percent thought that librarians are "available & accessible". The most pronounced results occurred in the questions about a librarian attending morning report. Seventy-five percent reported that a librarian at morning report influenced their opinion about librarians. Even more residents (85%) concluded that a librarian being at morning report improved accessibility to library services. And finally, all said that librarian attendance at morning report had a positive effect on learning.

Conclusion: Librarian attendance at morning report in this residency program will continue indefinitely. Computer/ projection equipment has been permanently installed for easy display of search results. The librarian maintains a nonintrusive but helpful presence. Residents have identified numerous creative possibilities for the future in working with librarians.

MP19

Regional Medical Library funding fuels consumer health initiatives

Mary Henning, Wyoming liaison, National Network of Libraries of Medicine, MidContinental Region, University of Wyoming Libraries–Laramie, and **Siobhan Champ-Blackwell**, Inner City and Minority Health Liaison, National Network of Libraries of Medicine, MidContinental Region, Creighton University Health Sciences Library, Omaha, NE

Objective: Three public libraries have formed collaborations with various health institutions in order to increase access to health information by minority populations. This poster will analyze the effectiveness of the projects in order to come up with recommendations for other public libraries looking at similar collaborations.

Methods: Funding was awarded to public libraries to aid in the development of consumer health projects targeting minority populations. Each of the libraries performed needs assessments of their patrons and developed outreach activities that met the needs extrapolated from the assessments. The strategies employed by the public libraries will be reviewed in order to formulate a basic model.

Results: Denver Public Library (DPL) partnered with Denver Healthy People 2010 to develop an extensive outreach plan to residents living in the low-economic enterprise communities. The partnership has allowed the library to develop a broad model of assessment, outreach and evaluation that utilizes a Web page to deliver health information to the target communities as part of its strategy. Boulder Public Library and Park City Library developed narrower outreach goals, and their models are accordingly more focused on their specific communities. A final model of outreach includes pieces from all three programs, with the broader DPL model serving as the basic structure.

Conclusions: The key to effective outreach is to develop a plan that includes assessment of the community needs and involvement of the community from the start. It also requires ongoing evaluation and fine-tuning of the outreach model. Lessons learned can be documented and shared to increase success of future outreach.

MP20

"This book changed my life": outcomes-based evaluation in a community health library

Christine W. Allen, coordinator, Community Health Library, Munson Medical Center, Traverse City, MI

Objective: To determine the impact the services of the Community Health Library has on users and to see if the library is fulfilling its mission. Focus of the study will be on the reference interaction.

Methods: This study follows an outcomes-based evaluation model developed by Durrence and Pettigrew (www.si.umich.edu/libhelp/toolkit/). Focus groups and personal interviews were conducted.

Results: Interviews and focus group transcripts were analyzed and coded. Five major outcomes emerged from the data: (A) The Community Health Library allows consumers to overcome barriers to finding and using consumer health information. (B) The service ethic and personality of the library staff are important in creating an atmosphere of trust and confidence among library patrons. (C) The Community Health Library's access to a broad range of current, high-quality, and credible health information is valued by library patrons. They value that materials are available in lay language that a consumer cdan understand. (D) Patrons use information received through services of the Community Health Library to make lifestyle changes related to their wellness, and make informed decisions regarding their health care. (E) Information and knowledge gained by health consumers enables them to create social networks and contribute to sharing with others.

Conclusions: The data collected show the Community Health Library does fulfill its mission and that the services offered provide a benefit to the people who use them. The data and stories we collected show that many physicians remain removed from the consumer's information-seeking process, and this concerns consumers. This demonstrates we have more work to do in outreach and education to the physicians about what the Community Health Library does and how consumer health information can add to the physician-patient interaction. One final conclusion that emerged as an overall theme from study participants is that these individuals feel it is their personal responsibility to be informed to make decisions about their health. They want to be actively involved consumers, working in collaboration with their physicians to direct their care.

MP21

Empowering health information consumers through local public libraries

Sally M. Patrick, project director, Utah Consumer Health Information Initiative, and **John C. Bramble,** outreach librarian, Outreach Department, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: The objective of this project is to create a supportive environment for statewide public libraries and librarians, so that they can, in turn, provide top quality, unbiased consumer health information to all citizens. In leading this initiative to expand its outreach mission, an academic health sciences library intends to create a successful national model of access to consumer health information through public libraries.

Methods: The medium-sized academic health sciences library is collaborating with rural and urban public libraries throughout this state, the state library, public health practitioners, and other health-related community organizations. While this state is primarily rural, it has sophisticated Internet connectivity and is developing telehealth partnerships. Resources for this project are funded by a one-year Library Services and Technology Act (LSTA) competitive grant. Other support includes the full resources of this academic health sciences library, a National Network of Libraries of Medicine, Regional Medical Library (RML) and the extensive Internet resources of the National Library of Medicine and numerous other government and academic online services. This state-wide multi-phase consumer health information initiative consists of forming partnerships to create programs and services to fill assessed needs, evaluate successes, and develop sustainable programs to ensure public access to authoritative consumer health information. Within the first four months of the project, the outreach staff of the academic health sciences library has visited a quarter of the seventy-one public library districts in the state. Needs assessments have been conducted, partnerships have been formed, and consumer health information training has been well received.

MP22

EMPOWER the people: rural public libraries and academic outreach supercharge electronic health information access

Ann Duesing, outreach librarian, Health Sciences Library, University of Virginia–Wise

Purpose (Objective): This poster describes an NN/LM-funded academic library outreach project in which managers from nine rural public libraries and community volunteers are provided training in access and use of electronic health information resources. The project expands from a cancer information project funded earlier by NN/LM. Expanded health information resources include conditions of particular concern to this rural area.

Brief Description (Methods): An outreach librarian and community cancer resource director with input from two community focus groups determined the format for a consumer health information page. The Web page includes specific health conditions with direct links to MedlinePlus. The page also incorporates other meta sites including the state health department and state guide to resources for seniors. Training was provided for the nine regional library managers who then trained their staff. Consumer workshops were provided at each public library site and community volunteers were selected. Four laptop computers and projectors, funded through the project, are used with a PowerPoint presentation developed by the outreach librarian, public library managers and volunteers. The volunteers give presentations to community groups, informing them about the available health resources found online through their public library that will empower their rural communities to access quality health information.

Results: The Outreach Consumer Health Web page with MedlinePlus resources was incorporated into the regional public library Web page Electronic Resources and utilized as the direct connection to health information for reference services and patron searching. Community members were informed about quality health information access through workshops and community volunteer presentations.

Conclusion: A significant need for training in access and utilization of quality health information was met for nine public library branch managers and sixty staff. If even half of the regional library system 83,940 registered borrowers are reached over time, this will be a significant step toward providing much needed health information access.

MP23

Sharing the power: adopting a grade school library

Mary E. Helms, AHIP, associate director, Library Resources & Technology; **Stuart Dayton,** head, Learning Resources Center/Sievers Facility; **Teresa Hartman,** head, Education; and **Sheryl WIlliams,** head, Serials; McGoogan Library of Medicine, University of Nebraska Medical Center–Omaha

Objective: The University of Nebraska Medical Center has a long-standing tradition of service to the local community. Employees are encouraged to participate in community outreach activities through various volunteer programs. One such program is Adopt-A-School. Through this program, the McGoogan Library of Medicine has chosen to "adopt" the library at Fontenelle Elementary in the Omaha Public School District. One of the largest grade schools in the district, Fontenelle student population has a large percentage of minority and low-income students.

Method: After meeting with the school librarian and the outreach coordinator at the school, the McGoogan staff saw a great need to help the school by raising money and purchasing books for the library. Through various activities such as book sales, "coins for candy," and wrapping gifts at a local store, the McGoogan staff has been able to raise over $1,000 each year, for the past three years to supplement their book budget.

MP24

The role of academic health sciences libraries in the promotion of early literacy: a prescription for success

Shari Clifton, head, Reference & Instructional Services, and **Robin Insalaco,** reference librarian, Robert M. Bird Health Sciences Library, University of Oklahoma Health Sciences Center–Oklahoma City; **Cindy Sharp,** outreach librarian,

Watson W. Wise Medical Research Library, University of Texas Health Center, Tyler, TX; and **Susan Sanders**, reference librarian, and **Ursula Ellis,** reference librarian, Robert M. Bird Health Sciences Library, University of Oklahoma Health Sciences Center–Oklahoma City

Objective: This poster describes the ongoing involvement of two academic health sciences libraries in the support of Reach Out and Read programs on the respective campuses.

Methods: Based on an initiative that started in 1989 at Boston City Hospital, the Reach Out and Read program makes early literacy part of pediatric primary care. In support of campus-based Reach Out and Read programs, two academic health sciences libraries organized and implemented successful book drives and public awareness campaigns.

Results: This poster reports on the initial collaborative efforts, details plans for future cooperative projects between the libraries and the Reach Out and Read programs, discusses the importance of early literacy and the connection between literacy and health, and provides information about the national Reach Out and Read program.

Conclusions: Campus ties between the libraries and clinical activities have been strengthened as well as raising awareness of the importance of early literacy and the role of early intervention.

MP25

The heart of the matter: improving health information access in Rhode Island

Ruthann Gildea, director, Library Services, Library, Butler Hospital, Providence, RI; and **Mary Ann Slocomb, AHIP,** director, Library Services, Lifespan Libraries, Rhode Island Hospital/Lifespan, Providence, RI

Objective: To contribute to the creation of the virtual "Library of Rhode Island" through cooperation and the shared use of technology.

Methods: This project establishes Rhode Island's first shared online monographic multi-type library information system with the integration of thirteen non-academic Association of Rhode Island Health Sciences Libraries (ARIHSL) libraries into the state's Higher Education Library Information Network (HELIN). HELIN is the consortium of all nine academic institutions in Rhode Island. A grant proposal was prepared and submitted to the Rhode Island Office of Library and Information Services (OLIS). The funds requested would pay one-time expenses for each participating library to become a HELIN Associate Member, for preparing the group's MARC holding records for incorporation into the HELIN database, and for the purchase of scanners. ARIHSL's membership in HELIN will move the state one step closer to realizing its dream of a "Library of Rhode Island" (LORI) capable of serving a full range of residents' information needs. All Rhode Islanders who need health information will benefit from the collaboration, but especially practicing professional and students in the health sciences. Access to the groups' 15,000 books will be greatly facilitated by inclusion in the HELIN database. At an estimated worth of over $1.5M, the collection is valued for its currency and comprehensive concentration in health-related fields, including pre-clinical science, medicine, surgery, nursing, allied health, health care administration, public health and bioterrorism, behavioral health, and consumer health. HELIN provides a single, stable platform from which all can identify local print and electronic resources available for onsite use or for obtaining via existing interlibrary loan channels or by patron-directed borrowing. Expanded access to a broader collection of materials deliverable in a timely fashion by the OLIS statewide delivery service will improve service quality in LORI libraries and stabilize or decrease ongoing operational costs. In August, 2003, ARISHL was awarded the grant to proceed with this project.

Results: Holdings' integration is in progress.

Conclusions: Rhode Islanders' access to health information has improved by building on the proven success of HELIN's resource- and integrated library system-sharing consortium and by ARIHSL contributing significant, unique, and much-needed health resources.

MP26

NC Health Info: the first model "MedlinePlus Goes Local" Website

Christie C. Silbajoris, AHIP, project director; **Brian Hilligoss,** systems development librarian; and **Diana McDuffee,** North Carolina Area Health Education Center Library and Information Services Network director; Health Sciences Library, University of North Carolina–Chapel Hill

Objective: This poster illustrates what NC Health Info, the first model "MedlinePlus Goes Local" Website, looks like today and describes enhancements planned for the future.

Methods: NC Health Info, funded through a subcontract with the National Library of Medicine (NLM), is a Web-based database of local health services Websites directly linked to MedlinePlus health topics. NC Health Info was developed by the Health Sciences Library and School of Information and Library Science at the University of North Carolina-Chapel Hill in collaboration with NLM. NC Health Info is one model for other states to follow in the provision of local health services information. This poster illustrates key features of the Website including the home and locations pages, the Quick Start option, and examples of pages containing lists of local resources dynamically generated based on user selections. In addition, the poster will describe a planned enhancement called "Bridges to Health," which will address the challenge of correctly characterizing and providing access to practitioner Websites when those Websites do not fully describe the services they offer.

Results: The partnership formed between the Health Sciences Library, School of Information and Library Science, and NLM resulted in the creation of NC Health Info, the first prototype "Go Local" companion Website to MedlinePlus. NC Health Info has been successfully implemented, and NLM is replicating the model for other states to follow.

Conclusions: We are monitoring user satisfaction through usability testing and user surveys. Some specific measurements include the conceptual understanding of our homepage, effectiveness of navigation, understanding of terminology and effectiveness of cataloging. In addition, we have received favorable comments from users, health care practitioners and librarians concerning the value of the provision of local health

services information linked to MedlinePlus, the user interface and the project's ability to help local organizations promote their services. We are tracking the number of Websites linking to NC Health Info and are analyzing Web traffic logs to uncover patterns in the usage of the site.

MP27

The power of improved practice in action: assembling the health information mosaic in Saskatchewan

Janet Bangma, head, Health Sciences Library, University of Saskatchewan–Saskatoon, Canada, and **Susan Powelson,** library director, Health Sciences Library, Regina Qu'Appelle Health Region, Regina, SK, Canada

Objective: This poster reports on the creation of the Saskatchewan Health Information Resources Partnership. This is a province-wide, government-funded initiative that will provide access to a suite of online information resources to all hospitals and health care practitioners in the province of Saskatchewan at the place and time of need.

Methods: Setting/Population: The University of Saskatchewan Health Sciences Library (HSL) is an academic library serving the colleges of medicine, nursing, dentistry, pharmacy and nutrition and the school of physical therapy. Within the project, the HSL is one partner of many that include The Saskatchewan Academic Health Sciences Network, the Saskatchewan Health Libraries Association, the Saskatoon and Regina Qu'Appelle Health Regions, Saskatchewan Institute of Applied Science and Technology, the University of Regina, as well as the government departments of Saskatchewan Health and Saskatchewan Learning.

Brief Description: This poster session reports on the process of transforming a serious Liaison Committee on Medical Education (LCME) accreditation issue at the University of Saskatchewan Health Sciences Library (HSL) into a collaborative, province-wide library project. The University of Saskatchewan HSL was cited in the 2002 LCME accreditation report as being under-resourced. This serious deficiency was a significant factor in the University of Saskatchewan College of Medicine's undergraduate program being placed on probation. This project description details the process of taking an accreditation issue that affected a single institution and, by working collaboratively with health libraries province-wide, developing a solution that benefited not only the HSL but all health care practitioners in Saskatchewan.

MP28

Informing neighborhood health*

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Jeffrey T. Huber, associate professor, School of Library and Information Studies, and **Teresa J. Walsh,** assistant professor, College of Nursing, Texas Woman's University–Houston, and **Beatriz Varman,** assistant director, Public Services, Reference, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX

Objective: The overall goal of the Informing Neighborhood Health outreach project is to facilitate information access at select faith-based health clinics in Harris County, Texas, that primarily serve the homeless and working poor.

Methods: The Informing Neighborhood Health project placed Internet-connected workstations at five faith-based clinics in Harris County, Texas, that primarly serve the homeless and working poor. Each participating clinic hosts clinical rotations for Texas Medical Center educational programs. Project workstations were placed in areas convenient for clinical staff to access. A project Web page was created to faciliate access to relevant electronic health information resources. Training was provided for clinic staff and students completing clinical rotations regarding use of electronic health information resources. Each training session included a pre- and post-session evaluation.

Results: Project workstations were used by clinic staff and students completing clinical rotations at each participating community clinic throughout the course of the project. Use of workstations to access electronic health information resources has been integrated into existing workflow processes.

Conclusions: Project workstations provide access to electronic health information resources that support the practice of evidence-based health care. As a result of this, faculty members who oversee clinical rotations at clinics participating in this project are incorporating use of these resources into their curriculum. For example, community health nursing faculty have added a library orientation session to cover electronic health information resources available via project workstations prior to the beginning of clinical rotations as well as an assignment whereby students must use project workstations and resources during clinical rotations.

MP29

Collection development through visualization: map library holdings and the community served using graphic information systems

Elizabeth La Rue, AHIP, student, School of Information Science, University of Pittsburgh, Pittsburgh, PA

Objective: Use geographic information systems (GIS) software to map public libraries, surrounding demographics, and library collections to determine if the library holdings serve its community.

Methods: After geocoding the public libraries in the City of Chicago, ArcGIS software will be used to create a visual representation of the libraries, their holdings and their surrounding demographics. The City of Chicago will be mapped from TIGER files, supported by the US Census Bureau, and census data will provide demographic information. An informal survey measuring consumer health collections will provide the needed information on the library's holdings.

Results: Currently, there exists no resource to compare a public library's physical collection with the community it supports. Using spatial aggregation (county, zip code, and street) and different methods of collecting library holdings enough data will be provided to create maps and demonstrate that GIS can be used by libraries in an effective manner to assist in collection development.

Conclusions: The outcomes for this project will be the following:

- spatial data analysis of a public library's collection supporting its community
- visual representation of public libraries in the City of Chicago
- visual representation of demographics surrounding the public libraries
- visual representation of consumer health collections in the City of Chicago public libraries
- adaptation of high-level software to create solutions

MP30

Pathway through the electronic maze

Alice B. Kuller, reference librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: Concurrent with the rapid expansion of electronic resources in our academic health sciences library is the challenge patrons face in deciding which location tools to use to find appropriate online books and journals. We have observed that finding electronic products is not intuitive, and structured guidance from the reference staff needs to be an essential component of our service.

Methods: As an academic health sciences library serving six schools of the health sciences and affiliated teaching hospitals, we have a very diverse user population of students (undergraduate, dental, medical, doctoral, and more), physicians, scientists, faculty, research assistants, technicians, and other staff. Our library offers more than 3,300 full-text books and journals, and the large university with which we are affiliated offers several hundred additional titles in fields related to the sciences and health care. Patrons are aware of the Ovid Full Text products, but many stall and seek reference desk assistance when the item needed is not offered through Ovid. The reference librarians are spending increasing amounts of time helping users find their way through the electronic maze that exists beyond Ovid. We plan to develop a Web-based user's guide that will serve as a pathway to the wide array of electronic resources. Our objective is to clarify with a concise and structured document the approaches that can be utilized to find online titles.

MP31

The power of online searching with words, phrases, and MeSH

helen-ann brown, AHIP, information services librarian; **Daniel Cleary,** head, Information and Access Services; **Diana Delgado,** information services librarian; and **Louise Falzon,** information services librarian; Weill Cornell Medical Library, Weill Cornell Medical College, New York, NY

Purpose: The purpose of this poster is to demonstrate an approach for a teaching moment, library-sponsored workshop, or lessons within a semester course that demonstrate that a search strategy using words, phrases and Medical Subject Headings (MeSH) in PubMed brings complete retrieval for patient care, education, and research.

Context: Information resources continue to appear at exponential rates. PubMed is several hundred journals larger with new print and electronic titles. In 2003 alone, an average of 52,000 citations were added monthly. With the popularity of Google, some searchers have adopted a similar approach to searching PubMed, by throwing words and phrases in one searching box to take advantage of PubMed 's mapping feature. Other searchers may rely only on MeSH. Both methods retrieve relevent citations, but both methods do not retrieve *all* possible literature. If one only searches with MeSH, the term will be automatically exploded and subheadings can be attached. However citations without MeSH terms (in-process or before a MeSH term was introduced) will not be retrieved. To retrieve a complete range of literature, one should search with words, phrases, and MeSH in PubMed.

Population: All searchers that receive instruction in the Weill Cornell Medical Library: faculty, staff, and students of the NewYork Weill Cornell Medical Center, CIMA faculty and staff, and students in LIS624 "Database Searching in the Health Sciences," Pratt Institute School of Information and Library Science.

Setting: Academic health sciences center

Intervention: A lesson plan including goals and objectives that will demonstrate the differences in retrieval when searching with words, phrases, and MeSH.

MP32

Using the principles of *The Tipping Point* to enhance library services

Patricia Vaughn, education librarian; **Elaine M. Attridge,** clinical and nursing liaison; **Gretchen Naisawald Arnold, AHIP,** assistant director, Library Operations; **Karen Knight,** education coordinator; and **Kelly Near,** outreach librarian; Information Services, Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Objective: Utilizing the role models identified in Malcolm Gladwell's book, *The Tipping Point,* and identifying the operating environment of specific user groups within our health system, the University of Virginia Health Sciences Library will develop a methodology with which to evaluate and refine our educational program for specialized services.

Methods: Our Library has seen an increased demand for personalized instruction. This trend has encouraged us to evaluate the way we provide our instruction based on context. By identifying each user group within our health system and defining their operating environment, information competencies will be determined. Existing classes may be modified and new ones created to meet these competencies. Classes will then be packaged into clusters and promoted to specific user groups. Contacts will be recorded. Utilizing theories from Gladwell's book, *The Tipping Point,* we recognize that librarians are natural "mavens," and we see an expanded role for our liaisons to act as "salespeople" in the promotion of these clusters to "connectors."

Results: The Health Sciences Library:

1. Expanded the liaison program.
2. Created targeted training for specific user groups.

3. Placed new emphasis on user's context.
4. Adopted standardized documentation method based on the subjective, objective, assessment, plan (SOAP) note for retrospective and prospective analysis.

Conclusions: We conclude that this is a useful strategy for reaching people who are not regular library users with hopes for creating an epidemic. Further experience with this method will provide additional insights on its effectiveness.

MP33

Delivering distance training to rural health care professionals

Jie Li, AHIP, medical center site coordinator; **Judy F. Burnham, AHIP,** assistant director, Adminstrative and Regional Services; **Justin C. Robertson, AHIP,** education coordinator; and **Thomas L. Williams Sr., AHIP,** director; Biomedical Library, University of South Alabama–Mobile

Objective: This poster reports on a project that delivers distance training to rural health care professionals. The project focuses on using information technology to provide off-site training on information seeking skills for rural practitioners.

Setting/Participants: In forming a partnership with rural hospitals, an academic health sciences library seeks to deliver training on multimedia products to rural health care professionals in addition to face-to-face training.

Brief description: Traveling to rural areas to provide training on information-seeking skills to rural health professionals is time consuming and costly. The academic health sciences library uses information technology to package training courses combining PowerPoint slides and video instructions. This poster describes the rationale, course design and development, and information technology and software used in the project. It will also electronically demonstrate the multimedia training products.

Results: The multimedia tutorials developed are efficient learning tools for rural health care professionals. Rural health care professionals welcome the distance training modules as they are flexible and can be used asynchronously. It is also a great help for librarians, as it is very difficult to schedule training sessions that everyone can attend. It also has high potential to expand the learning tools to patients and their families.

Discussion: Multimedia packaged distance training courses provide a practical alternative to face-to-face training for rural health care professionals. It enables the librarians to provide training without traveling long distances, thus saving time and money. Rural health care professionals may access the modules at a time convenient to them and at a pace suitable to their learning style.

MP34

What is the relationship between eating bananas and searching Ovid MEDLINE? Or, feed them, and they will learn!

Marilyn A. Rosen, biomedical information specialist, Edward G Miner library, University of Rochester Medical Center, Rochester, NY

Program Objective: Librarians set out to capture and maintain the attention of first-year medical students in their library classes by distributing different foods as focus activities, or icebreakers, at the outset of each class and relating them to the course content.

Setting/Participants: The academic health sciences library serves a school of medicine and dentistry, school of nursing, and 690-bed hospital. The librarians teach a section of the "Mastering Medical Information" (MMI) course for first-year medical students in a series of six hands-on labs as part of a problem-based curriculum. These classes take place in five computer labs.

Program: Some instructors used food sporadically in previous years during MMI and observed that offering food increased the students' attention. Why not try this technique as an opener in all classes, using a more organized approach among all instructors? A subcommittee was given the task of relating each food to the content of the lesson for that day, no matter if the food was a Life Saver or Rice Krispies bar. The explanation for the treats was included with the curriculum outlines. Focus activities without food were also an option.

Main Results: The instructors found that no matter what their teaching style (even if they detested ice breakers), these "food stories" were easy to incorporate. "Wow" was a common reaction from the students. Librarians, as well as students, had an opportunity to discuss something they had in common—the food!—at the outset. Evaluations were distributed to every student at the end of the MMI sessions, and the food theme was mentioned as a positive feature in a majority of results.

Conclusion: Focus activities gave the instructors a chance to think not only about course content, but also about how students learn. These food openers were so successful that the staff has used food focus activities in other library classes and in their hospital outreach sessions.

MP35

MeSH mapping of medical acronyms across selected systems: a comparative study

Mary Shultz, AHIP, assistant health sciences librarian, Library of the Health Sciences-Urbana, University of Illinois–Chicago, Urbana, IL

Objective: Given the common use of acronyms in the health sciences, searchers may be entering acronyms rather than full phrases when searching online systems. The purpose of this study is to evaluate how various MEDLINE/Medical Subject Headings (MeSH) interfaces map acronyms to the MeSH vocabulary.

Methods: The interfaces to be used in this study include: the PubMed MeSH Browser, the PubMed Automatic Term Mapping feature, the NLM MeSH Browser, the NLM Gateway Find Terms option, and Ovid MEDLINE. Acronyms will be randomly selected from the *Dictionary of Medical Acronyms & Abbreviations,* 4th edition, by Jablonski. The test data will include fifty acronyms whose related meanings are MeSH terms. Each acronym will be entered into each MEDLINE/MeSH interface to determine if it actually maps to the corresponding MeSH term. A comparison will be made across the selected interfaces to determine variations in the accuracy

of acronym mapping to MeSH. Preliminary tests indicate that differences among interfaces do exist.

Results: The results of this study demonstrate that the selected interfaces differ widely in mapping acronyms to MeSH. It was also found that successful mapping of acronyms to MeSH is generally low across all interfaces studied.

Conclusions: This study demonstrates the differences in effective mapping between the systems tested. Searchers may receive different results in the different MEDLINE interfaces, even when the same acronym is searched. This finding is important when selecting a search interface and when instructing users.

MP36

New tool for displaying the search results from PubMed as a matrix

Bradley W. Otterson, biomedical librarian, NIH Library, National Institutes of Health, Bethesda, MD

Objective: To identify PubMed searches for which a matrix display of search results will enhance or simplify retrieval analysis using a new tool called PubMatrix. PubMatrix was designed for searching National Center for Biotechnology Information (NCBI) databases to retrieve, display, and compare records for cDNA microarrays. The tool has potential uses for analyzing the literature for non-gene-type records, such as meta-analyses, evidence-based medicine (EBM), trends, and data mining.

Methods: Develop a series of experimental searches and enter them into PubMatrix. The searches are conducted via the PubMed interface to the MEDLINE database. The retrieval from each search is displayed in a matrix that can be visually analyzed, individually queried, and automatically archived. If the tool is useful for non-genetic-type purposes, it will provide a visual and numerical analysis of the retrieval, allowing the searcher to save time and effort while improving service and practice. Searching PubMatrix is available at pubmatrix.grc.nia.nih.gov. It is provided by the National Institute on Aging at the National Institutes of Health.

Results: PubMatrix processes the searches and creates a matrix of the results. The matrix is useful for comparing and visualizing non-genetic-type searches that contain simple combinations of terms such as diseases, treatments, outcomes, and dates. PubMatrix can process 100 search strings at one time, but only the search strings with fewer than 65 characters are compared and displayed. This constraint limits the versatility of the system. The data from the matrix can be loaded into Excel for creating different graphics of the retrieval.

Conclusions: PubMatrix is a tool that librarians can use to search simple combinations of terms and to present the results in a visual format to their users. Users will find value in the visual presentation of complex data, giving librarians another resource at their command as they focus on providing knowledge, not mere data.

MP37

Reinventing the library orientation as an information fair: a collaborative venture

Carlos I. Rodriguez, medical school liaison; **Frank Campbell,** health sciences libraries liaison/Web coordinator; **Melanie Cedrone,** biology and biomedical graduate studies liaison; **D'Maris Coffman,** IT support specialist; **Bentley Jenson,** head, Access and Document Delivery Services; **Varvara Kountouzi,** coordinator, Education and Research Services; **Gretchen Kuntz,** clinical liaison; **Sherry Morgan,** school of nursing liaison; **Linda Rosenstein,** associate director, Information Resources; **Anne Seymour,** associate director; Biomedical Library; and **Rod MacNeil,** manager, Customer Services, School of Medicine Information Services; University of Pennsylvania–Philadelphia

Objective: Reinvent the library orientation as a fair to: (1) improve student attendance, (2) create awareness of the library resources and services, (3) have a fun event, and (4) create a template for future library orientations.

Methods: During orientation week, 150 first-year medical students are given several hours of free time in which they can attend an event, e.g., library orientation, financial aid counseling, etc., of their choice. In the past, many students considered library orientations as boring; therefore, they were poorly attended. To overcome negative student perceptions, the Biomedical Library reinvented the library orientation as a theme-based information fair with a raffle and giveaways. The library collaborated with the Medical School's Office of Student Affairs and Department of Information Technology Services (ITS), to hold its first Information Fair, "Passport to Information." The focus was for the students to have fun and learn about the library/ITS resources. Information stations (Destinations) were created to highlight library/ITS resources. Each student received a Passport, which served both as a guide to destinations and as the raffle ticket. The students were free to visit the destinations in any order, get their passports stamped, stay for as long as they wanted, and pick up giveaways. Information fair attendance was determined by doing a head count, and figures were compared with prior library orientation statistics. User satisfaction was evaluated anecdotally by random exit poll questioning, comments written on raffle books, and voluntary comments made by students.

Results: Attendance improved from 50% (75 students out of 150) to 99% (148 out of 150 students). After the fair, students asked for resources that had been highlighted at the fair. Students associate the library with people rather than just a place. The planning and implementation of the fair lifted staff morale. A successful template was created for future library fairs.

Conclusions: Students prefer a theme-based information fair over a traditional library orientation. However, student attendance at the fair is dependent upon which times the students are free and which events are competing with the fair. Also, a key to successful information fairs is to choose willing and appropriate partners.

MP38

Everyone benefits from clear communication: how can a hospital library be a catalyst for plain language?

Carolyn J. Paul, senior librarian, Access Services; **Deborah Jameson, AHIP,** librarian; **Julia Whelan, AHIP,** senior outreach librarian; and **Elizabeth Schneider, AHIP,** director; Treadwell Library, Massachusetts General Hospital–Boston

Objective: Plain language is writing and speaking in a clear and effective way. Our goal is to create a self-sustaining plain language training program that benefits both patient and hospital. Clinician use of plain language raises health literacy. Staff use of plain language makes all forms of communication more productive.

Methods: Setting/Participants: Large urban teaching hospital. The program is open to all departments and clinics.

Program:

- The library director joins with key staff from other areas to bring in a plain language trainer for a series of two-day workshops. There are three levels of training. Each workshop earns twelve contact hours.
- The library and patient education committee plan a daylong event for National Health Literacy Month.
- The library offers a lunchtime working group each month and a Web page with resources
- The hospital and library use the American Medical Association Health Literacy video to create awareness and promote the workshops.

Results: Three beginning-level and two advanced-level workshops train 100 staff from diverse disciplines throughout the hospital. The lunchtime working group attracts 8-10 people each month. Projects include the revision of: patient teaching material, consent forms, and translations into other languages.

Conclusion: Librarians can be leaders in bringing plain language to their workplace. The library offers a place for people to meet, resources for learning, and a staff with enthusiasm for clear writing and speaking. Above all, the library serves as a catalyst for collaboration among groups.

MP39

Health literacy and consumers: from theory to practice

Michelle Ochillo, NLM associate fellow, Arizona Health Sciences Library, University of Arizona–Tucson

Objective: The Arizona Health Sciences Library, University of Arizona (AHSL), developed a workshop to educate public health professionals and public librarians on the barriers encountered by patients and consumers when attempting to understand health information provided to them by their health care provider or when searching on the Internet. The workshop includes effective strategies to use to improve health communications to patients and consumers, including using Internet resources that are especially sensitive to health literacy issues.

Methods: AHSL is a large academic library located in an urban area of a largely rural state. As a part of the Arizona Turning Point Project, workshops have been conducted throughout the state with the goal of educating and disseminating public health information to health professionals and librarians. Arizona is one of twenty-three states that received funding from the Robert Wood Johnson Foundation to strengthen and transform the public health infrastructure in the United States. The goal of Arizona Turning Point Project is to improve the public health system on a community level by providing training and disseminating health information in public and non-public health programs in Arizona. The Health Literacy workshop defines what health literacy is and the barriers and strategies that can improve health communications between providers and consumers. Additional topics address: what populations are likely to have health literacy issues, the impact of health literacy on health care costs, preparing and evaluating patient education materials, and health communication and special populations. The workshop will be presented in all fifteen counties to both public librarians and public health professionals.

MP40

Seize the power: librarian roles in developing and implementing enterprise-wide Health Insurance Portability and Accountability Act training

Shelley Bader, AHIP, associate vice president, Educational Resources, and **Alexandra Gomes,** assistant director, Technology and Curriculum, Himmelfarb Library, George Washington University Medical Center, Washington, DC

Objective: Librarians were charged with the responsibility of designing a Health Insurance Portability and Accountability Act (HIPAA) training program for all medical center staff and students. The program needed to include all key HIPAA issues and be accepted as training by the affiliated covered entities visited by students and residents. Continuing medical education (CME) certification was desired for faculty completing the training.

Methods: The associate vice president educational resources, chair of the HIPAA Education Committee, asked the library's assistant director, Technology & Curricular Services to collaborate in developing a web-based HIPAA training module for the medical center. Content was based on materials from an outside legal expert. Special attention was given to clinical scenarios illustrating key issues in HIPAA regulations. The librarians drafted the module, which was reviewed by legal counsel (for accuracy), the School of Medicine & Health Sciences, and the Graduate Medical Education Office. The module was piloted with a student group and revised. The final module with test questions was disseminated using the university's course management tool. A corresponding module was prepared and tested for CME credit. The Graduate Medical Education (GME) Office submitted the module to affiliates and received approval for compliance. Librarians coordinated this mandatory training program with academic units.

Results: In Phase 1, over 2,900 people completed HIPAA training. The program was shared with the University for implementation with selected groups (e.g., speech pathology, clinical psychology, student health). Feedback was overwhelmingly positive (scenarios reinforced understanding of HIPAA's impact on clinical practice), though comments expressed dismay about the program's length and legalese. An update about the security rules released later in the year was emailed to all participants and incorporated into the module.

Phase 2 focused on training all new students and residents for 2003/04. Phase 3 addresses the need to migrate the module to the university's new course management system.

Conclusions: This successful implementation created the opportunity to participate in the development and implementation of a second mandatory clinical training program for the medical center. We were asked to modify and coordinate the dissemination of the hospital's 2004 National Patient Safety Goals training materials for use by medical students and residents.

MP41

The state of eating disorders research publications 1980–2000: an empirical analysis

Mary J. Markland, AHIP, Southeast Clinical Campus librarian, Harley E. French Library of the Health Sciences; and **Stephen A. Wonderlich, associate** chair/professor; **James E. Mitchell,** chair/professor; **Ross D. Crosby,** director, Biomedical Statistics & Methodology; **and Martina de Zwaan,** research scientist; Department of Neuroscience, Neuropsychiatric Research Institute; School of Medicine & Health Sciences, University of North Dakota–Fargo

Objective: In the following project, a librarian's skill and experience were essential components in evaluating a body of literature. The authors examined the eating disorders literature to answer three questions: what is the quality of eating disorders publications, has the quality of eating disorders publications changed over time, how does the quality of eating disorders literature compare to publications in anxiety.

Methods: Faculty and staff from the University of North Dakota Neuroscience Department and the Neuropsychiatric Research Institute collaborated with the clinical campus librarian to develop a strategy for evaluating the eating disorders and anxiety literature. The researchers created a 75-item rating instrument based on the recommendations of the American Psychological Association (APA) Task Force on Statistical Inference. Comprehensive search strategies were developed using PubMed and PsycINFO to identify articles to evaluate. The search results were imported into EndNote. Seven hundred and fifty articles were obtained, and 476 articles met the evaluation criteria. Each article was then read by 2 raters who used the rating instrument and evaluated the article. A rule book was created to assist the raters in answering the rating instrument questions. The raters were blind to author, journal, and author affiliation. The statistical analysis was done using hierarchical log linear analysis.

Results: The major results of the evaluation found that eating disorder publications tend to be less methodologically rigorous than anxiety publications in important areas such as structured interviews, random assignment, prospective longitudinal design, and blind outcome assessment. Both the eating disorders and anxiety literature have shown improvement in methodological rigor over the last twenty years. However, the majority of articles in both disciplines do not include many of the APA Task Force on Statistical Inference recommendations such as confidence intervals, clinical significance, a priori power analysis, and alpha constraint.

Conclusions: In conclusion, the literature of eating disorders is improving in quality over time as compared to the anxiety literature. Both fields of study need to better utilize the APA Task Force on Statistical Inference recommendations to improve the quality of their publications.

MP42

Development of the INASP Health Links Website, a gateway to more than 600 selected Websites for health professionals, medical library communities, publishers, and nongovernmental organizations in developing and transitional countries

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

Objective: The objective of the INASP Health Links project is to develop a gateway that assists health professionals and health information workers in developing and transitional countries in utilizing information on the Internet. Use of the gateway facilitates the bridging of the information gap between the "North" and the "South." This poster discusses the development of the gateway including the selection and evaluation criteria used to review potential websites and the design criteria.

Methods: The INASP Health Links (www.inasp.info/health/links/) consists of three sections. Each section has several pages of hyperlinks, arranged alphabetically. Each hyperlink carries a brief description of the site concerned. The three sections are general health resources, specified health resources and library and publishing support and use of ICTs. INASP Health Links is compiled, updated, and maintained by Lenny Rhine, Health Science Center Library, University of Florida. It is monitored by Neil Pakenham-Walsh, manager, INASP Health Programme, and a voluntary Advisory Group coordinated by Christine Wamu Kanyengo, medical librarian at the University of Zambia. Individual pages of INASP Health Links are advised by Subject Expert Advisers. The INASP Health Links sites are selected and evaluated according to criteria adapted from the evaluation questions developed by the Special Advisory Group on Evaluation for BIOME/OMNI, a gateway to Internet resources in the health and life sciences. The first essential criterion is that the site contains information that is relevant for developing and transitional countries. In addition, selected sites must fulfill at least five of the following six criteria:

- Authority: Does the information come from a reliable source?
- Coverage: Does the resource cover the subject adequately?
- Presentation: Is the source professionally presented? Are there any typographical or grammatical errors?
- Currency: Is the information kept up to date?
- Cost: Is the resource free of charge?
- Freedom of use: Can the contents be freely adapted and redistributed to local end users?

Conclusions: The INASP Health Links gateway is a useful tool for accessing relevant health information on the Internet. The volume of use in developing and industrialized countries continues to grow.

MP43

Pestilence throughout the ages

Patricia A. Auflick, outreach services librarian, and **Andrew A. Padua,** student, Arizona Health Sciences Library, University of Arizona–Tucson

Objective: The purpose of this poster is to look at epidemics throughout history and how public health addressed these events.

Methods: History is rife with events that have influenced and shaped our nation and the world such as the loss of 8.5 million lives during World War I (WWI). But these political and historical events often pale in comparison to public health events, which have had a more profound effect. Take for example, the influenza epidemic of 1918–1919 that followed on the heels of WWI and cost more than 20 million people their lives. This poster will look at epidemics that have occurred throughout history, the number of people affected and the lives that were lost, and the public health response to these catastrophic events.

MP44

A reusable template for evaluating point-of-care information products

Patricia Weiss Friedman, reference librarian, and **Andrea M. Ketchum,** reference librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objective: For evaluation of commercial Web-based point-of-care information products aimed at primary care clinicians, develop a reusable template that enables structured comparison of content, interface, and features and can inform subscription decisions but is independent of any particular product or version.

Methods: Based on communication among participating librarians, a working list of point-of-care products of interest and a preliminary list of questions about them were developed. Questionnaire topics included scope, organization, and content development methods; product architecture and interface navigation; potential for integration with other environments; and product niche as perceived by its vendor. Questions were organized into outline format, then refined into a structured interview questionnaire. Interviews, in person or by phone, were conducted with representatives for PDxMD (MDConsult), InfoRetriever, Clineguides (Ovid), and DISEASEDEX (Thomson). Questionnaire structure provided the basis for a product comparison grid that was populated with text as interviews were completed. For at-a-glance comparison in checklist form, an attribute field was added to the grid, interview responses were analyzed into single product attributes, one per row, and attribute presence in each product was indicated by check marks.

Results: Just as the questionnaire's modular structure facilitated display of interview data in different formats, it also simplified extraction of a subset of questions to be answered by reference librarians during hands-on product testing. Questions about scope, organization, content development methods, and interface navigation were selected for this phase of testing. Some testers requested question clarification, suggesting that not all questions are equally generalizable to all products, which would hamper their reuse. However, all testers were ultimately able to submit answers. Also, question relevance was not affected by product changes, such as the emergence of Skolar from what had been Clineguides.

Conclusions: With its modular structure, the questionnaire template provides a flexible, reusable tool for evaluating point-of-care products. Appropriate question subsets can be extracted for different populations (such as product representatives and reference librarians) and for administration in different circumstances (by interviewer during live encounter and self-administration during hands-on product use).

MP45

Consumer health information Websites: the state of the art

Andrea Ketchum, special projects librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Purpose: In preparation for redesigning the Health Sciences Library System (HSLS) consumer health information (CHI) Website for the System (HSLS of the University of Pittsburgh, an informal survey of Consumer Health Information Websites was conducted to identify trends in format and content.

Subjects/Resources: The first ten returned pages from a Google search for "university 'Consumer Health Information'" produced thirty Websites from sixteen states and three from Canada. These were primarily from academic settings, but included two public libraries and two hospital libraries with formal relationships to universities. A few university CHI sites had ties to commercial entities, such as insurance companies. Government sites were not included in the survey.

Methodology: The Websites were analyzed for structure (12 fields) and content (17 fields).

Results: The most common Website design was a one-page scrolling list of external and internal links (97%), with contact information (79%) and a last update notice (55%). The least common web sites featured interactive tools (3%), advertisements (6%), and a more complex design, including multiple frames (6%), navigation tabs (6%), tables (12%), and a site map (15%). Medical news and alternative medicine were the most frequently offered specialized subject categories, appearing in twelve (36%) of the Websites. It was most interesting that the majority of the sites were organized by format of information resources such as dictionaries, handouts, journals, and Websites (61%), rather than by subject (39%).

POSTER SESSION 2

Tuesday, May 25, 2004, 10:30 a.m.–noon

TA01

PDA power at the bedside: a comparison of the use of *5 Minute Clinical Consult* by medical and physician assistant students and residents

Patricia Wilson, associate director, Public Services; **Richard Billingsley**, coordinator of information and instruction; and **Leah Pellegrino**, head, Cataloging and Reserves; Himmelfarb Health Sciences Library, The George Washington University, Washington, DC

Objective: To compare personal digital assistant (PDA) use by third- and fourth-year medical students, second-year physician assistant students, and residents in the clinical setting and using the feedback to plan further PDA programs.

Methods: The library was investigating PDA resources when a medical education grant was received. The funds were allocated to the PDA Committee to evaluate products using the following criteria: Palm and Personal PC operating systems compatibility, ease of use, depth of information, product cost, and target audience. Skyscape's 5 Minute Clinical Consult (5MCC) was selected for this pilot project. The project focused on residents and students doing clinical rotations. Registration was required to receive the software and loading instructions. Student lists ensured that only the target groups received free software. A short questionnaire was developed to evaluate usage in the clinical setting. The questionnaire, sent via email, provided feedback.

Results: Of potential respondents, 43.6% received their complementary copy of 5MCC and had 5 to 7 months to use it. Thirty-eight responses have been received (28 medical students, 9 residents, 1 physician assistant student). Of these, 24 used other medically related software on their PDA. Medical students chose more basic resources while residents selected drug guides and medical calculators. Sixty-seven percent reported using their PDA "all the time"; 60% reported using PDA software for drug information, 10% for medical calculators, 29% for disease etiology or epidemiology, 26% for diagnosis, and 32% for treatment decisions. Overall, 24% reported using 5MCC on a regular basis. Fifty percent used 5MCC to obtain background information on specific conditions, and 53% to enhance their own knowledge. Eighty-nine percent stated that the software improved their work in clinical/patient care situations. All would recommend 5MCC to others.

Conclusions: Data suggest that individuals familiar with PDAs tended to rely more heavily on them as sources for clinical information. Medical and physician assistant students in a clinical setting reported using 5MCC as a source of primary clinical information more frequently than the residents. Usage patterns suggest this is a good choice as a basic clinical information tool for students.

TA02

Forging new relationships: nurses' perception of nursing research in a community hospital, a collaborative project with the nursing department

Robin D. Siegel, AHIP, medical librarian, Medical Library, and **Julie Shocksnider**, maternal child clinical nurse specialist, Maternal-Child Services, CentraState Healthcare System, Freehold, NJ

Objective: To determine if an educational session will affect nurses' perceptions of the nursing research climate and associated support services in a community non-teaching hospital.

Methods: The librarian and the maternal/child clinical nurse specialist at a non-teaching, community hospital collaborated to obtain a grant from the local chapter of Sigma Theta Tau to examine this question. Thirty-one participants attended a sixty-minute, hands-on program taught by a librarian from the National Network of Libraries of Medicine on searching PubMed and MedlinePlus. The population was a convenience sample of registered nurses who work at a 240-bed acute care, non-teaching community hospital. They were given a 17 item nursing research survey before and after the program. The expected outcome was that the educational intervention will show a positive affect on how nurses perceive the nursing research climate.

Results: Thirty-one nurse participants attended a one-hour educational session on searching the medical and nursing literature. The seventeen question survey showed a positive change in ten questions from pre to post-survey. Utilizing a paired, two-tailed t-test, the nurses showed a statistically significant change in their perception of the ease of obtaining nursing research findings, their knowledge of how to perform a literature search, and the facility's promotion of nursing research. The educational session showed a positive impact on all questions relating to the library.

Conclusions: Working collaboratively, the librarian and a nurse designed a project, obtained a grant, and presented a program that promoted nursing research and library services. Further plans include a follow-up to determine if our participants made any changes in research or library utilization and expansion of this educational opportunity to other nurses.

TA03

PDA medical sources: handheld power bringing information to the point of care or need.

helen-ann brown, AHIP, information services librarian, Weill Cornell Medical Library, Weill Cornell Medical College, New York, NY, and **Rebecca Levine**, practicum student, Weill Cornell Medical College, Pratt Institute Graduate School of Information and Library Science, New York, NY

Context: About eleven million handheld devices have been sold. More than 50% of Canadian physicians under 35 use personal digital assistants (PDAs), and it has been predicted that by 2004, 20% of all physicians will use handhelds for electronic prescribing, ordering and checking laboratory tests, capturing charges and dictating notes. Now and in the future, health care providers carry Palms, Sony Clie, or PocketPcs with clinic schedules, roster of patients with their chief complaints, information resources, and their hospital formulary.

Purpose: To provide excellent recommendations of quality handheld hardware and software for librarians in preparation of health care providers asking for guidance, criteria to judge hardware and software and examples of ways to offer PDA access and instruction on using PDAs in our libraries.

Method: Create a criteria checklist to judge hardware and software for handheld devices and apply it to these resources. Ask PDA-using health care providers for their recommedations of hardware and software. Search the literature for articles telling of PDAzones, group or individual instruction, and unique ways to apply to patient care.

Results: With scrutiny for memory size, screen resolution, battery life, processing time, use of buttons and other keyboard features, and compatibility for downloading, syncing, and beaming, health professionals are purchasing PDA hardware. Health care professionals rely on now almost standard ePocrates or Tarascon Pharmacopeia, Griffiths 5 Minute Clinical Consult, many medical calculators, and information resources like MD Consult and Ovid@Hand at their fingertips. With scrutiny for reliability of contents, ease of use, timeliness, and price, health professionals have chosen to download or purchase those or other software. University of Arizona Health Sciences Library; Bio-Medical Library, University of Minnesota; Tompkins-McCaw Library, Virginia Commonwealth University; the Health Sciences and Human Services Library at the University of Maryland–Baltimore; Duke University; and the Norris Library at the University of Southern California, just to name a few centers, offer support for PDA use from syncing stations, to classes, to purchasing consultations.

Conclusion: Over many more wireless networks, PDAs, and future generation handheld devices contribute to improved health by bringing valuable information to the point of care or need.

TA04

The power to practice: development of an opinion database related to scope of practice for New York state registered nurses

Warren G. Hawkes, AHIP, director, Library/Records Management, New York State Nurses Association–Latham

Objective: To create a database of opinions from government agencies and professional associations that specifically address the parameters of practice for registered nurses in New York state.

Methods: The New York State Nurses Association is the professional association for registered nurses in New York. The association receives thousands of queries a year about the RN's ability to perform specific procedures/tasks under the broad law regulating the practice of nursing in New York. A database was created of governmental agency and professional association opinions addressing these scope of practice questions. Utilizing a Lotus Notes interface, documents were scanned in using both OCR and a TIFF format. This process provides full-text search capability, as well as, retrieval of original document images. Regular review and evaluation of opinions is completed to ensure the validity of the database and assure the legality of specific nursing practices.

TA05

Transitioning a successful clinical informationist model from an inpatient to an outpatient setting

Molly Cahall, NLM associate fellow, and **Nunzia B. Giuse, AHIP**, director, Eskind Biomedical Library, and **Dario A. Giuse**, associate director/associate professor, Informatics Center/Biomedical Informatics Department; Vanderbilt University Medical Center, Nashville, TN

Objective: To integrate evidence-based medicine into the workflow of clinical teams in an outpatient primary care setting.

Setting/Participants/Resources: A large academic biomedical library, an adult outpatient primary care center.

Methods: This library has an established successful clinical informationist model that provides evidence-based medicine to nine inpatient units in a university hospital. A previous attempt to transfer the paradigm to an outpatient clinic setting failed largely because of the model's inability to fit within the existing workflow of an outpatient environment that relies heavily on the use of computerized medical informatics systems. This project focuses on a new attempt to facilitate the integration of clinical evidence into outpatient clinic workflow by integrating library services with existing informatics tools. The project consist of three distinct phases: (1) observe environment weekly for three months; (2) in collaboration with the clinicians and informatics center developers, identify a strategy for integration that will fit seamlessly within the team workflow; and (3) pilot the new intervention with one clinic and determine strategies for scalability.

Results: Two primary care physicians submitted six clinical questions over four weeks from within patients' electronic health records to the library's message basket via StarPanel, an informatics tool developed for Vanderbilt University Medical Center's Electronic By 2003 (E3) initiative. An established evaluation tool was used to assess physician satisfaction with the librarian's evidence-based responses delivered via this tool. On a ten-point Likert-type scale, the physicians assigned the highest rating to the librarians' performance for adequacy of clinical understanding, relevance of information provided, accuracy of literature interpretation, and effectiveness of the literature review presentations. Both physicians indicated they would strongly recommend the service to others.

Conclusions: Use of a message basket system within a previously established computerized medical information system is a successful strategy for delivering evidence-based medicine to adult primary care physicians and integrating medical librarians into outpatient clinic workflow.

communication with administrative staff. Any health sciences course offerings were noted. The literature was also reviewed for qualitative program reviews.

Results: While 44.4% of library school curricula include online courses, there are surprisingly few library schools that provide online degrees: only twelve programs can be completed with minimal residency requirements. Satellite sites, held in physically remote locations (29.6%) or via video conferencing (27.8%) are also popular distance education options. Over one third of schools (37.0%) provide no distance options at all. Several schools also offer health science specializations (11.1%) or dual master's degrees (7.4%) relevant to the health sciences. Of the others, most still offer some science course offerings (74.1%). Unfortunately, little literature exists on the online programs currently being offered. What has been published tends to be self-generated and publicity oriented. Publication of objective comparisons of these services would enable potential students to make better informed decisions.

Conclusions: There are several quality distance education programs currently offered nationwide. Some offer opportunities specific to the working health paraprofessional. By enrolling in these programs, ambitious library assistants can effectively pursue their career development while maintaining their current position.

TA09

Effects of geographic factors on the education and training of health sciences librarians in the mid-Atlantic states

W. John MacMullen, doctoral student, School of Information and Library Science, University of North Carolina–Chapel Hill

Objective: Investigate potential relationships between the geographic location of librarians' graduate education and training and their subsequent employment and continuing education.

Methods: Web-based survey instruments and online content analysis of MLA and information and library science (ILS) program Websites.

Setting/subjects: Approximately 400 health sciences librarians holding the master's or other degrees from 35 Association of Academic Health Sciences Libraries (AAHSL) member libraries in the mid-Atlantic states, ILS program Websites within the same region, and MLA's resource of health sciences librarianship courses in ALA-accredited programs.

Results: While there are approximately 400 health sciences librarians working in 35 AAHSL member libraries in the 7 mid-Atlantic states (Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, and Washington, DC), there are few accredited schools of information and library science in that region that provide coursework and training specifically targeted toward educating current and future health sciences librarians. This study will investigate where librarians in the mid-Atlantic region received their graduate degrees and to what extent geographic factors affected their decisions about where to seek their degrees and employment.

Conclusions: In general, the results should help ILS programs understand the potential demand for health sciences libraries instruction and should help libraries understand from where future recruits might be drawn.

TA10

Have mobile videobroadcasting unit, will travel: training librarians to offer "any place, any time" classes and events via streaming video

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

Objective: The Midcontinental Region (MCR) of the National Network of Libraries of Medicine (NN/LM) sought to offer its members live and archived video streaming events and classes, so that member librarians could view the events regardless of location and time constraints. The mobile videobroadcasting unit was designed so that it could be shipped to resource libraries. Training sessions were held to allow resource libraries to broadcast from their location.

Methods: The mobile videobroadcasting unit consists of a computer with high-end video capture card, scan converter, video switcher, and audio equipment. The equipment is bolted to a rack encased in a hard-sided mobile cart commonly used by musicians to ship equipment. A high-end video camera and tripod are shipped separately from the cart. Once at the broadcasting site, the equipment can be assembled for a live broadcast within fifteen minutes. The computer includes software for encoding live video in both Real Media and Windows Media format. The live stream is sent to a server at the Regional Medical Library for broadcast over the Internet. MCR staff conducted training sessions at several resource libraries in advance of live events. The results of the training and regional participation in the events will be presented.

Results: Two training sessions were conducted in March and April of 2004. Results from the training sessions will be presented. In addition, a new lighter, smaller mobile videobroadcasting unit has been configured. The new unit will make the technology more accessible to Resource Libraries, as well as being less costly to ship and easier to set up.

Conclusions: The mobile videobroadcasting unit offers a unique way to offer distance education opportunities to member libraries by presenting events and classes via streaming video.

TA11

CHARTing local health data: teaching librarians statistical tools for public health research

Helena VonVille, director, Library, School of Public Health, University of Texas Health Science Center–Houston, and **Deborah Halsted**, associate director, Public Services & Operations, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX

Objectives: (1) Improve access to local health, demographic, and environmental data in the state of Texas; and (2) instruct librarians on the use of the resources.

Methods: A Website was developed that provided access to health-related data, including determinants of health. Four criteria were established for inclusion on this Website to ensure the authoritative nature of the data.

To date, the authors have led a pre-conference workshop for the 2003 Texas Library Association Annual Conference and have presented at a regional medical library conference. A collaborative relationship with the Texas Public Health Training Center has also been developed; classes offered in 2004 are marketed through the training center to public health practitioners throughout Texas as well as librarians. The site also serves as the clearinghouse for Workgroup L (health statistics) of the Texas State Strategic Health Partnership. This site has been shared with other schools of public health in Texas. It has also been demonstrated to students and faculty at the University of Texas School of Public Health-Houston.

Results: Participants in classes have found the site to be useful as a means of bringing the data together in one place. However, the large amount of information that is provided in a class that is typically just three hours long has been problematic for some attendees.

Conclusions: The development of the site has been a welcome addition for many people. It will continue to be updated and classes offered although they will evolve based on evaluations received. An interactive online instructional package will be developed later in the year and marketed through a variety of sources.

TA12

An objective scale to evaluate MEDLINE searches

Russell Smith, librarian, Reference Department, Norris Medical Library, University of Southern California–Los Angeles

Objective: Can an objective scale be developed to evaluate students' performances in searching MEDLINE?

Methods: Students were presented with search questions that contained commonalities for the basis of evaluation. Each search strategy required the use of two Medical Subject Headings (MeSH). One MeSH would require at least one explode and/or one subheading. Use of focus, English, and human-only studies were required. Retrieval was structured so that students would have a large enough pool of citations to permit them to identify five relevant citations from the pool. The grading scale assigned 20 points each for the MeSH terms; 10 points for use of explode; 10 points for appropriate use of focus, human, and English-only limits; 5 points for identifying an appropriate subheading; and 5 points for each relevant article. This created a 100-point scale. To pass, students were required to earn a score of at least 70 points.

Results: Over a three-year period, average student scores have increased from 85% to 92%. Over the same period of time, percentage of failures has dropped from 13 to 4.

Conclusions: An objective scale can be developed to evaluate student performances in MEDLINE.

TA13

Focus on the goal: designing a MEDLINE guide for a digital library

Carol Mita, reference & education services librarian, Reference & Education Services, Countway Library of Medicine, Harvard Medical School, Boston, MA

Objective: This poster presentation describes the steps taken in developing an illustrated guide to Ovid's MEDLINE at a major academic health sciences library. This guide is now available through multiple entry points on the library's Website, creating "point of care" instruction.

Methods: Complexity of technology can create multiple barriers to conducting effective MEDLINE searches for users who are otherwise successful at finding information online. Our library serves a widely distributed academic community that includes affiliates at over seventeen hospitals, research centers, and institutes. As an increasing number of users access our library remotely, we look for ways to provide information and services through our Digital Library. We wanted to develop online MEDLINE instruction that included our institution's customized features and functions in Ovid's interface, such as linking to full-text articles and holdings information in the library catalog. In the process of developing our MEDLINE guide, we discovered the importance of focusing on our goal of providing assistance with known points of confusion, in a format that could be used easily and efficiently at the point of need.

Conclusions: The process of producing a concise illustrated guide to Ovid's MEDLINE has provided us with the foundation for future endeavors in creating online teaching guides and tutorials. The poster includes ideas for applying usage data to further analysis and development to effectively assist online users.

TA14

Public services librarian I

Cynthia McClellan, public services librarian I, and **Janice Skica**, campus library director, Health Sciences Library at Stratford, University of Medicine and Dentistry of New Jersey–Stratford

Objective: This poster documents the development and implementation of the "Library Survival Skills" module, an online, interactive learning tool.

Methods: Librarians at the University of Medicine and Dentistry of New Jersey Health Sciences Library at Stratford will launch this project with students enrolled in a graduate level health professions education program at the University of Medicine and Dentistry of New Jersey. Evidence points to a need for new learning opportunities focusing on fundamentals of information literacy and the role of the library within the institution. In order to reach a diverse clientele, we have designed a "Library Survival Skills" learning module using WebCT software. Included is a glossary, tutorials, and pertinent Web pages. Students may contact the librarian instructor with questions, which are then archived in an accessible FAQ. An adaptable cybertool will help surmount distance and scheduling challenges. More cognizant and savvy users will be empowered and confident in subsequent resource exploration and utilization. When this occurs, practice will be improved across the board, as all parties avail themselves of this convenient learning tool.

Evaluation Methods: A pre- and post-module survey will be automatically administered utilizing the software and analyzed in order to determine the effectiveness of the project.

Results: This tool is undergoing active development at present. In-house library evaluation and subsequent retooling of the modules is ongoing, thus we have adjusted the test date. During the weeks of April 5–16, the library will release and market the course to a sample group of students enrolled in the university's Psychiatric and Vocational Rehabilitation Programs, as well as to staff within key clinical departments. Measurement data gathered from the pretest and follow-up survey will be presented subsequently.

Conclusions: Communicating effectively within the relatively new framework of electronic learning is a challenging but worthwhile endeavor. Providing our constituents with a firm grounding in the basics of library tools, services, and information literacy will encourage the utilization of pertinent resources, increasing the visibility and effectiveness of the library throughout the institution.

TA15

Sharing the power: training consumer health information center volunteers online

Kathleen A. McGraw, information services coordinator, and **Jean Blackwell**, librarian, User Services, Health Sciences Library, University of North Carolina–Chapel Hill; **Julie Sweedler**, manager, Women's Health Information Center, NC Women's Hospital, Chapel Hill, NC; and **Mary W. White**, graduate assistant, and **Angelique Jenks-Brown**, graduate student intern, User Services, Health Sciences Library, University of North Carolina–Chapel Hill

Purpose: This poster will share the process of creating an online tutorial for training volunteers to provide direct customer service in a consumer health information center.

Setting/Participants/Resources: The participants of this project were librarians and graduate assistants from a large, academic health sciences library collaborating with a health educator and volunteers from a hospital-based consumer health information center.

Brief Description: Consumer health information centers often have limited staff available to provide service to walk-in and telephone customers. One way to address this problem is to recruit volunteers. However, volunteers must be trained to interact professionally with customers. Online training materials allow volunteers to pursue necessary training in a self-directed manner while on a varied schedule. This poster will outline the development of an online volunteer training module from the initial identification of need through implementation. We will explore the process of defining the purpose and goals for volunteer training materials, developing the content of an initial print manual, organizing and adapting the print manual for online access, designing an interface to provide easy navigation of the content, and adding self-assessment tools to ensure that volunteers learn the content. We will describe implementation, evaluation, and plans for revision of the tutorial. The success of this project was dependent on collaboration between the manager and volunteers of the information center and the librarians and graduate students of the affiliated academic health sciences library.

Results/Outcome: The initial result of this project is an online tutorial designed to train consumer health information volunteers working in a specific center. The outcome of using this tutorial will be to train the center's volunteers more effectively and efficiently. Effective, efficient training of volunteers will allow the center to pursue additional projects. The tutorial also has potential to be adapted for use in other consumer health information centers and settings.

Evaluation Method: Current and new volunteers will evaluate the content of the online tutorial. A library student working as a volunteer will evaluate the usability of the Web interface.

TA16

Utilizing the power of continuous process improvement in technical services

Lisa Palmer, catalog librarian; **Barbara Ingrassia, AHIP**, associate director, Technical Services; and **Jennifer Varney**, catalog librarian; Lamar Soutter Library, University of Massachusetts Medical School–Worcester; **Penny Glassman**, technology coordinator, New England Region, National Network of Libraries of Medicine, University of Massachusetts Medical School–Shrewsbury; and **Elaine Russo Martin, AHIP**, director, Library Services, Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: Examine the efficiency of work processes in the Technical Services Department, with the goal of reducing the turnaround time by 50% or more for three specific processes: (1) acquiring books for requestors, (2) implementing serials title changes, and (3) handling of journal issues from receipt to binding.

Methods: In summer 2003, the library initiated a Continuous Process Improvement Project. The project's goal is to reduce time and/or save money by examining and improving work processes. The charge for the Technical Services team is to (1) reduce the turnaround time by 50% or more for firm orders from when the book is ordered to when it reaches the requestor; (2) reduce the time it takes by 50% or more to implement a serials title change, which involves staff throughout the library; and (3) reduce the time it takes by 50% or more for a newly received journal issue to reach the shelf and eventually be bound. The team is utilizing value-added flow analysis to examine the processes and will make recommendations to management for changes to be implemented in a pilot project.

Results: The team met weekly over four months to identify the specific steps involved in each process, review the time involved in completing each task, analyze whether or not the step added value, and suggest improvements to the process. Team members documented and timed current workflow in spreadsheets and flowcharts. The team proposed a number of procedural changes and initiatives that were accepted by library management for a five-month pilot project, which is now ongoing. Important components of the implementation are establishing procedures for better communication and additional staff training.

Conclusions: Value-added flow analysis is a useful tool for continuous process improvement. The library's goal of reducing turnaround time by 50% or more for these three specific processes will be achieved, as demonstrated in the pilot project. Technical Services will be better able to serve its internal and external customers.

TA17

Pathways to Online Information (ePOI): a collaborative project "one-stop-shopping" for e-resources

Virginia M. Tanji, AHIP, librarian, Library Resource Center; **Steven Seifried**, associate professor, Cell and Moledular Biology; and **Annis Lee Adams**, assistant librarian, Library Resource Center; John A. Burns School of Medicine, University of Hawaii–Manoa, Honolulu, HI; **Carolyn Ching, AHIP**, reference services coordinator, and **Sarah Jansen**, reference librarian, Reference Department, Hawaii Medical Library–Honolulu; and **Paul Wermager**, librarian, and **Jessica Hashimoto**, digital librarian, Science Technology Public Services, Library, University of Hawaii–Manoa, Honolulu, HI

Objective: ePOI is a Web database for providing a single point of access for electronic biomedical resources owned by Hawaii Medical Library (HML), a subsidiary of Queens Health Systems, and University of Hawaii-Manoa (UHM) Library. In a unique contractual arrangement between John A. Burns School of Medicine (JABSOM) and HML, the students, faculty, staff, researchers, and clinicians of the College of the Health Sciences at UHM, which includes JABSOM, and the Schools of Nursing and Social Work, have access to electronic resources in the biomedical sciences from two major and separately administered collections. HML has a contract with JABSOM to provide access to clinical medical resources while UHM Library supports the basic sciences, nursing, and social work. Many constituencies of each library have access to both resources.

Methods: Users and librarians were finding it increasingly difficult to identify quickly what titles were available via each library without checking in several places. The project group envisioned the creation of single access site to electronic resources available from both libraries. The idea led to a collaborative project between JABSOM, HML, and UHM Library funded by a NLM grant under its Internet Access to Digital Libraries program. Title-specific data were compiled by machine and hand from data extracted from LocatorPlus. Holding-specific data were compiled and updated by manual entry and Serial Solutions reports.

Results: The project produced the first comprehensive portal of biomedical holdings in Hawaii. Users can search for e-books, e-journals, databases, and Websites available at HML and UHM Library by full title, keywords, and journal title abbreviations or browse alphabetical lists. Once a journal is found, users directly link to the proxy server in the respective library. Initial anecdotal feedback from patrons indicates an enthusiastic reception to ePOI. Librarians of all partner institutions have found the database helpful for locating available e-resources.

Conclusions: The ePOI project resulted in a highly successful public-private collaborative endeavor that brought together a variety of partners. Ongoing analysis of Website use statistics will be used to investigate use patterns by the patrons, and provide data required of the librarians for their administrative bodies.

TA18

Improving fill rates at an academic medical library

Ellen N. Sayed, AHIP, information services librarian/ interlibrary loan coordinator, Interlibrary Loan, and **Geneva Bush Staggs, AHIP**, assistant director, Public Services and Education, University of South Alabama–Mobile

Purpose: This paper reports on the findings from a review of unfilled interlibrary loan requests to determine why the lending fill rate was decreasing and procedures implemented for improvement.

Setting: The Biomedical Library at the University of South Alabama is a resource library in the National Network of Libraries of Medicine. Locally, the library serves the Colleges of Medicine, Nursing, and Allied Health. The Biomedical Library has an extensive journal collection, serving local and regional as well as some national and international information needs.

Brief Description: As a resource library, the Biomedical Library is expected to maintain a DOCLINE interlibrary loan lending fill rate of 80%. When the DOCLINE interlibrary loan (ILL) lending fill rate dropped below 80%, and the OCLC fill rate fell below an acceptable level, a review of all unfilled requests for a randomly selected three months was undertaken. Remedial steps and environmental issues are discussed.

Results/Outcome: It was determined that requests in the lacking (LAC) category represented 48% of the unfilled requests, while requests from the LAC, not yet received (NYR), cost (CST), and other (OTH) categories combined, represented 88% of the unfilled requests. Unusual circumstances, which may have been additional contributing factors to the low fill rate, were a large shifting project and new staff. Internal training procedures for how to search the online public access catalog (OPAC) and consistent use of ILL codes were considered. Unfilled requests were used to update SERHOLD holdings, which, in turn, were used to update OCLC holdings. With regular updates of SERHOLD, the DOCLINE interlibrary loan lending fill rate improved to 80% and higher.

Evaluation Method: Tracking interlibrary loan statistics as reported by OCLC and DOCLINE.

TA19

Empowering interlibrary loan: implementing ILLiad in DOCLINE/Loansome Doc libraries

Joan M. Gregory, AHIP, technical services librarian; **Camille M. Salmond**, interlibrary loan supervisor; and **Amy B. Birks**, interlibrary loan specialist; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: This poster will document how to setup ILLiad for DOCLINE/Loansome Doc libraries, will pinpoint ILLiad functions/features that do not work well with DOCLINE/ Loansome Doc, and will identify a list of enhancements and changes needed to optimize the interaction between ILLiad and DOCLINE/Loansome Doc for submission to NLM and OCLC.

Methods: The experience gained by an academic health sciences library in setting up ILLiad during the past year is documented and supplemented by a survey of other DOCLINE/Loansome Doc libraries implementing and using ILLiad.

Results: Solutions to the DOCLINE/Loansome Doc specific challenges of setting up and using ILLiad are presented as well as a list of needed enhancements based on a survey of DOCLINE/Loansome Doc libraries that have implemented ILLiad.

Conclusions: ILLiad software is optimized for OCLC, not for DOCLINE/Loansome Doc. Implementation in a DOCLINE/Loansome Doc library that has never used interlibrary loan management software has many advantages, but there are also challenges to overcome.

TA20

The power of many: development of an collaborative promotion system to market and evaluate electronic resources

Nicola J. Cecchino, electronic resources librarian, and **Holly A. Harden**, liaison librarian, Welch Medical Library, and **David Wright**, senior reference specialist, Lilienfeld Library; Johns Hopkins University, Baltimore, MD

Objective: To establish a process by which all departments within an academic health sciences library have a stake in promoting electronic resources.

Setting: An academic health sciences library with a distributed user community of over 23,000 providing a large digital collection.

Brief Description: Since 1998, over 4,000 electronic resources have been made available to patrons via the digital library. As a result patrons have more access to these resources via their desktops. However, selecting, promoting, and educating patrons about the different resources has been a challenge.

Results: A project workflow chart was developed to indicate when and how certain departments/areas of the library were to be involved in the selection, promotion, and evaluation of the product. From determining if trials were needed, to when information and education services were to be involved, to promoting through outreach efforts by liaison librarians, all were indicated in the pathway.

Conclusion: While implementation is a challenge, evaluation of the promotion system is ongoing. The increasing reliance on electronic resources by our patrons means that we must continually develop this promotion system, so that we can guide patrons to appropriate resources. An improved system also means that staff time is used more efficiently and effectively. Digital resources must be promoted and carefully managed to improve services to end-users and to achieve best value for money from our investment in these products, systems, and services. Involving all library departments in the process and workflow of electronic resource promotion has enabled a successful collaboration of work among the employees.

TA21

Bringing order to chaos: an Access database for ordering pamphlets and brochures for a large institution

Ruth Volk, librarian, Patient Education Resource Center, Comprehensive Cancer Center, University of Michigan–Ann Arbor

Objective/Purpose: The goal of this project is to automate and simplify the brochure ordering process in a large cancer center that distributes hundreds of brochures and pamphlets to patients in various areas of the institution.

Methods: Setting: A comprehensive cancer center distributes hundreds of brochures to patients and families. The brochures are stocked separately in various areas of the center. Ordering brochures is a tedious, time-consuming process. In order to prevent inventory shortages and save money and staff time, a librarian created a centralized Access database, consolidating all orders into one monthly report.

Brief Description: The database enables specific areas in the cancer center to create a "standing order" of brochure titles they stock. The orders are combined into one monthly order report that contains the contact information of the brochures' suppliers, the titles, and the quantities to order. A designated secretary does the ordering for all areas of the cancer center. Other reports in the system assist in distribution and follow-up of the orders.

Results: The brochure ordering database has streamlined and simplified the brochure ordering process for all areas in the cancer center The database has helped to cut down on staff time needed to order brochures, as well as reduce costs by placing large bulk orders and shipments.

Conclusions: Brochures and pamphlets are important formats in consumer health libraries. Automating the ordering process has enabled our institution to ensure that the inventory is fully stocked at all times. In addition, the database has generated great savings of staff time and money.

TA22

Selection and implementation of interlibrary loan management software

Ellen N. Sayed, AHIP, information services librarian/interlibrary loan coordinator; **Evelyn Reed**, library technical assistant I; and **Earl Thompson**, library technical assistant I; Interlibrary Loan, Biomedical Library, University of South Alabama–Mobile

Setting: The Biomedical Library at the University of South Alabama is a resource library in the National Network of Libraries of Medicine. Locally, the library serves the Colleges of Medicine, Nursing and Allied Health. The Biomedical Library has an extensive journal collection, serving local, regional as well as some national and international information needs. The Biomedical Library has satellite sites at two affiliated hospitals. The Interlibrary Loan/Document Delivery Department processes about 10,000 interlibrary loan requests and about 3,000 document delivery requests per year.

Brief Description: This paper describes the selection and implementation of Clio in a busy interlibrary loan/ document delivery department in an academic, medical library. With a steady increase in the volume of requests, and changes in the fee structure, better data management capabilities were deemed necessary. Implementation issues for both interlibrary loan and document delivery services among three sites are discussed. Pros and cons of interlibrary loan management software are addressed.

Results: Clio provides convenient and timely management of data for billing and reporting.

Evaluation Method: Improved ability to measure the department's performance. Outstanding requests can be identified and tracked in a timely manner. Reports on level of service to faculty, staff, students, and other libraries can easily be determined.

TA23

Power of partnership: librarians and pediatric nurse educators working together to improve the delivery process for patient education materials

Misa Mi, AHIP, librarian, and **Cathy Eames, AHIP**, manager, Medical Library, Children's Hospital of Michigan–Detroit

Purpose: The poster will demonstrate an ongoing digital project undertaken to create a Web-based digital collection of handouts delivered as readable education materials for parents and families of pediatric patients. It will illustrate how the medical librarians developed a partnership with pediatric nurse educators in digitizing these materials and making them available in a printable format, 24/7, on the organization's intranet and at off-site pediatric clinics.

Setting/Participants/Resources: Children's Hospital of Michigan, one of the eight Detroit Medical Center hospitals located in Detroit, is the only freestanding pediatric hospital in Michigan. The Medical Library provides library resources and services to support pediatric patient care, clinical research, and education programs. The medical librarians have been collaborating with nurse educators in creating a Web-based collection of patient education handouts including surgeries, procedures, discharge, medication instructions, and hospital brochures.

Brief Description: The pediatric nurse educators representing different units and departments developed low literacy handouts used as teaching tools for parents and families of pediatric patients. Many existing education handouts lacked a consistent format and were scattered in various locations. The nurse educators collected them and selected useful ones for the digital project. The librarians identified resources for the nurses to use in developing and updating the materials; provided expertise for software program selection, formatting, indexing, and copyright; scanned the materials; and designed a Website of the digital collection. The Web-based digital education handouts can be searched by category, title, and Patient Education Program (PEP) number. The top ten highly used handouts ranked by nurses of each nursing unit are listed separately for easy access.

Outcome/Evaluation: The project has centralized the patient education collection and increased its usage among nurses and other health care professionals. Through a Web statistic program and hit counter feature on the Website, the librarians monitor usage and access statistics. To date, comments from nursing staff and other clinicians have been favorable.

TA24

Consumer health resource database generated from the Consumer and Patient Health Information Section email discussion list

Stephanie Weldon, consumer health and outreach liaison, Denison Memorial Library, University of Colorado Health Sciences Center–Denver

Objective: The objective of this poster presentation is to demonstrate the collaboration between consumer health librarians in contributing to the Consumer Health Resource Database. This database is a compilation of the knowledge that flows across the Consumer and Patient Health Information Section (CAPHIS) email discussion list.

Methods: The method of this project.

1. A need was realized to harness the vast amount of information that flows across the CAPHIS email discussion list.
2. A database was created in MYSQL to ensure that it was robust enough to handle the vast amount of information that could be potentially added to the database.
3. CAPHIS librarians can add information to the database as they desire. This is a database created for librarians and maintained by librarians.
4. A CAPHIS Web subcommittee was established to enter data into the database.
5. When the database is robust enough, it will be released to the CAPHIS email discussion list so that all members may add their pertinent data.
6. Data generally includes information such as a favorite Spanish language book on breast cancer, a videotape on multiple sclerosis, or a list of vendors that are easy to work with and provide Czech language resources.

TA25

REACH 2010 Charleston and Georgetown diabetes coalition: partners in library-diabetes education working to eliminate health disparities

Barbara A. Carlson, AHIP, librarian; **Beverly Highland**, community health advisor; **Anna Johnson**, community health advisor; **Florene Linnen**, community health advisor; **Virginia Thomas**, community health advisor; and **Sharon Cash**, community health advisor; REACH 2010 College of Nursing, Medical University of South Carolina–Charleston

Objective: To determine if library instruction and services presented with lay community diabetes education can increase awareness and use of public library diabetes resources by African Americans with diagnosed diabetes, their families, and their friends in two South Carolina counties and help eliminate health disparities related to diabetes by supporting quality diabetes self-management education.

Methods: The Learn About Diabetes @ the Library Program integrates library education into community-driven initiatives

to provide sustainable diabetes self-education in communities. The program is designed to reach a minimum of 100 African Americans with diagnosed diabetes, their families, and friends. Pre-test, post-test, and follow-up phone surveys evaluate changes in library use, attitudes, diabetes information-seeking behavior, communication with health care providers, and community empowerment. Interventions are facilitated by partnerships with public libraries, community health advisors, and grass-root community organizations. Customized print and Web-based finding guides, posters, pathfinders, bookmarks, Web narratives, and other educational materials provide tailored educational programs.

Results: The percentage of REACH library participants who reported looking in libraries for health information rose from 26.1% to 50%, and those looking for diabetes information went from 14.8% to 42.9%. After REACH sessions,78.6% said they would use libraries for health information in the future, and an additional 16.7% said maybe they would.

Conclusions: Peer-led, culturally appropriate diabetes education coupled with public library outreach appears to raise awareness and use of library resources for health information.

TA26

Urban health partners: new outreach for improving health-related services to Arab American communities in Michigan

Deborah H. Charbonneau, coordinator, Information Access and Delivery, and principal investigator, Urban Health Partners, and **Annette M. Healy**, information specialist, Vera P. Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: This poster will report on the experiences of an academic medical library's collaborations with staff at local health departments and community-based organizations for a program titled Urban Health Partners (UHP). UHP's overall goals include developing and delivering onsite training programs for staff at city and county health departments, information and document services, and a Website supporting information needs related to local urban health challenges, particularly those affecting minority and ethnic populations. One of the unique elements of UHP features collaboration with community-based organizations providing health-related services to Arab American communities in Southeastern Michigan. A key objective is to therefore identify and test strategies for improving information and health-related services to this diverse and underserved population.

Methods: UHP is funded by the National Network of Libraries of Medicine (NN/LM) to develop culturally relevant information resources and services, onsite training, and document services for health providers serving at-risk communities in Metropolitan Detroit. According to the Arab Community Center for Economic and Social Services (ACCESS), the Metropolitan Detroit area is home to the largest Arab population in North America, and Arab Americans are the third largest and fastest growing minority group in the state of Michigan. In response, the UHP Website features culturally relevant information, including health information in Arabic, connections to National Library of Medicine and Centers for Disease Control and Prevention databases, and links to local service organization partners to empower health providers serving the target audience. Insights into promising or best methods for developing information resources, customized onsite training, and document services for health providers serving Arab Americans will be presented.

TA27

The power of partnerships: bringing medical librarians to the public eye

Cheryl A. Capitani, AHIP, chief librarian, and **Laurie J. Schwing**, librarian, Library Services, PinnacleHealth System, Harrisburg, PA

Objective: PinnacleHealth System (PHS) and Dauphin County Library System (DCLS) in Harrisburg, PA, embarked on a partnership to be fully implemented by the end of 2002. The plan was to increase public awareness of the specialized medical resources and databases of PHS libraries and to update the print consumer health collection at PHS. The surprising result of this partnership is that it continues to refuel itself and that patrons who realize the availability of resources and librarians come back for more.

Methods: One huge county library system and one nonprofit health care conglomerate created a joint venture supported with a Library Services and Technology Act (LSTA) grant application. The consumer health "revolution" had only begun and people were wildly surfing the Web for critical health information. Even highly educated patrons often "didn't know what they didn't know" about authoritative and reliable Websites and would grab an old *Physician's Desk Reference* and try to understand highly sophisticated medical terms in researching their own prescriptions. The partnership was intended to improve library service to those persons who have health information needs and was awarded a sizeable LSTA grant. It was selected by the Commonwealth of Pennsylvania as one of two LSTA projects to showcase to the Institute of Museum and Library Services (IMLS) national funding agency. The importance of the project was recognized as providing a link between two types of libraries and addressing a previously unmet library services need. The relationship is working. The combined catalog of four medical libraries has been placed on the Web and linked to the public library system Website. An "Ask A Medical Librarian" link has been placed on the Website as well. Consumer health materials are now loaned to the public through a quick-request procedure between the health system and public library system. Consumer health resources at the medical libraries are kept updated. And patrons are encouraged to visit one of the medical libraries for personal and private assistance from a librarian. The future includes plans for a new public library adjacent to the campus of one of the health system sites. And, for certain, there will be more and more enlightened health care consumers.

Results: Since the full implementation of the partnership between the public library system and the PinnacleHealth System Libraries, forty-one consumer health patron contacts have been made by the medical libraries through referrals or contacts with the public library system. Moreover, the amount of contact between the librarians at each entity continues to increase and numbered approximately thirty substantial interactions during the most recent year. Staffing of public

events such as health fairs and presentations has also been done jointly. The Ask A Medical Librarian link on the public library Website was only recently fully implemented and the results of this are anticipated in the coming months. Due to a substantial decrease in the public library funding in Pennsylvania, the Dauphin County Library System has fewer staff hours and funds to dedicate to the partnership but needs reference assistance from health librarians more than ever as their own library hours and staffing has decreased.

Conclusions: Attracting the public to medical libraries that are often hospital based or located at a health facility has some barriers that were unanticipated at the outset of this partnership. Now more than ever, we are realizing that the resources and the services must be brought to the consumer at the places with which they are most comfortable and familiar. This outreach will be a cornerstone of future planning between Dauphin County Library System and PinnacleHealth System Libraries.

TA28

Susquehanna Library Cooperative: enhanced resource sharing 2004: digital power + collaborative power = power of improved practice

Tricia Haas, district coordinator, North Central Library District, James V. Brown Library, Williamsport, PA; **Michael Heyd, AHIP**, director, Learning Resources, Susquehanna Health System, Williamsport, PA; and **Claire A. Huntington**, Reference librarian, and **Susan M. Robishaw, AHIP**, assistant director, Health Sciences Libraries, and **Britain G. Roth, AHIP**, director, Academic Information; Geisinger Health System, Danville, PA

Objective: To demonstrate enhanced, expedited, efficient document delivery among fourteen diverse Susquehanna Library Cooperative (SLC) member libraries using a standardized electronic delivery system (Ariel)

Methods: SLC is a unique mixture of academic, medical, public, and special libraries serving 500,000 people in 11 counties in rural central Pennsylvania, established in 1973 to facilitate interlibrary loan (ILL) among members. Academic libraries were early adopters of costly technological equipment designed to improve document delivery. Smaller medical, public, and special libraries could not afford the same equipment, creating barriers to resource sharing, which SLC addressed by successfully seeking grant funds. In 1989, grant funds bought fax machines for 7 libraries, equalizing the ability of members to deliver documents quickly. In 2003, SLC directors concluded that resource sharing would improve significantly if all members could deliver high quality documents using the same electronic platform. SLC received Library Services and Technology Act (LSTA) funds to obtain computers, scanners, printers, and Ariel software for the nonacademic libraries. Software and hardware was purchased and installed in the fall of 2003.

Results: Anticipated results: a 10% increase in volume, distribution shifted to Ariel electronic delivery: not met. Installations incomplete March 2004. Computers, scanners, printers, software purchased, received, distributed in early December 2003. Ariel training class held. Final installation at some libraries delayed due to heightened Internet security issues, e.g., recent proliferation of hackers, viruses, and worms such as MyDoom, SoBig. Information security specialists and network administrators reluctant to open a port in firewall. Discussions continue weighing the benefits of access versus the potential for security breaches.

Conclusions: Member libraries of SLC still expect to demonstrate the power of collaboration, harnessing technology to improve service to their varied clientele. The power exists, but the ongoing issue of network security must be resolved. Potential solutions include: Establish an ASP model for "store and retrieve" service for Ariel customers and facilitate a Website of successful Ariel implementation configurations and corresponding institutional contacts within NN/LM.

TA29

Camp for all connection*

*Funded in part by NLM Contract No. N01-LM-1-3515

Jeffrey T. Huber, associate professor, School of Library and Information Studies, and **Teresa J. Walsh**, assistant professor, College of Nursing, Texas Woman's University–Houston, and **Beatriz Varman**, assistant director, Public Services, Reference, Houston Academy of Medicine-Texas Medical Center Library, Houston, TX

Objective: The overall goal of this outreach project was to facilitate access to electronic health information in the health center located in the main lodge of the Camp For All camp facility.

Methods: Camp For All provides barrier free camp experiences for children and adults with chronic illnesses and disabilities. The camp facility is located on 206 acres in Burton, Texas. Each camp session is required to include a health care provider as well as appropriate camp staff. Prior to this project, however, health care providers did not have access to the Internet. For the Camp For All Connection project, three Internet-connected workstations were placed in three distinct areas within the health center in the main lodge of the Camp For All camp facility. A project Web page was developed to facilitate access to relevant electronic health information resources. Training on use of electronic health information resources was provided to senior camp staff and senior summer camp counselors. These individuals in turn acted as trainers for health care providers and remaining summer camp counselors. Site visits and group interviews were conducted throughout the project's duration to evaluate its effectiveness.

Results: Project workstations were used throughout the course of the project. Camp staff observed project workstations being used for reference purposes as well. For example, a contract nurse hired to staff the muscular dystrophy camp who was not familiar with muscular dystrophy used the medical dictionary in MedlinePlus to look up terms. Physicians used dermatology images to verify conditions not typically seen in the hospital setting such as bee stings. Pharmacists used drug resources to verify drug interactions and drug levels.

Conclusions: The project has proven so popular that project staff have been invited to participate in Camp For All's spring orientation. This orientation session is attended by representatives from every summer camp. Being included in the orientation will allow project staff to describe Camp For

All Connection resources firsthand prior to the beginning of the summer camp season.

TA30

Communication paradigms for community outreach, the Allendale study

Dennis A. Pernotto, head, IAIMS/Program Evaluation, Health Sciences Library, Louisiana State University Health Sciences Center–Shreveport

Objective: The goal of the pilot project is to develop effective communication models among and between participants, to devise education and treatment modalities that address culturally based diabetes, and to impact not only the diabetic patient but the family unit.

Methods: Setting/Participants/Resources: Allendale is an inter-city area touching three zip codes. This community has the highest rate of diabetes in the city, which itself has the highest rate in the state. The state is tops in the nation in diabetes deaths (2002). Thirty-two percent of the patients at this medical center reside in this area. Traditional clinical treatment of diabetes produced limited effectiveness in long-term healthy lifestyle choices. To address this problem, stakeholders were enlisted from multiple departments at an academic medical center, a state university, a state university agricultural extension service, and personnel and resources at public libraries, community agencies, faith-based organizations, local, state, and national associations.

Goals: to explore/develop culturally appropriate and medically accurate health information models; to encourage community initiatives that promote healthy choices; to enlist health care providers, educators, faith-based and community agencies, and businesses to empower patients to make personal decisions; and to place prevention first by reducing risk factors and complications of chronic diabetes to close the gap in health disparities.

Results: As a result of planning meetings among stakeholders and focus groups with patients/families, the project has evolved into a modified longitudinal study with a focus on the interrelation between a patient's self-determination score and that same patient's scores on indicators from treatment procedures. This self-determination test will be given as a pretest to all patients entering the study and will be given at fixed intervals during treatment (e.g., every six months) as a posttest.

Conclusions: Preliminary indications based upon the comparison of scores from a self-determination instrument used as a pretest and health measurements of indices such as blood pressure, weight, and hemoglobin levels taken during the first two months of treatment sessions indicate that there is a positive correlation between the two.

TA31

Access to electronic health information in North Central Pennsylvania

Valerie Gross, AHIP, librarian, Academic Information, Community Health Resource Library, and **Britain Roth, AHIP**, director, Academic Information, Health Sciences Library, Geisinger Health System, Danville, PA

Objective: Community members and public librarians in eleven rural counties were educated to become their own health care advocates, to develop the skills to find trusted health information on the Internet, and to access the professional support of the consumer health library located in a tertiary care center.

Methods: Taking advantage of the "Access to Electronic Health Information" training sessions and instructional material, the participants accessed quality health information on the Internet at their local public library. Two one-day conferences on health information services were held. Forty-five public librarians from the eleven rural county regions were invited to attend the one-day conference. Twelve public libraries in five rural counties were selected to receive online health information access training for their patrons. The targeted libraries were chosen due to availability of computers, perceived need, and willingness of the librarians to be involved. Participants in all classes were asked to complete a Pre-training evaluation, post-training evaluation and three-month post-training evaluation form to gauge the effectiveness of the classes.

Results: Three evaluation forms were used to assess the success of the program. The pre-training evaluation form asked participants for their areas of interest. The most popular topics to search were general medicine, women's health, surgery, and medication. The post-training evaluation form was used to assess the effectiveness of the training class. The responses were positive, with all questions answered in the 90th percentile. Three months after the training class, attendees were mailed an evaluation form to ascertain whether they had used what they learned in the training class. Eighty-eight percent responded that they had used what they learned.

Conclusions: Community awareness of quality and valid health information via the Internet is steadily increasing in North Central Pennsylvania. Through this ongoing collaborative project, public librarians and public library patrons continue to receive valuable information about finding trusted health resources on the Internet.

TA32

If it's Tuesday, it must be Belgium: the power of an urban circuit rider

Patricia May, AHIP, director, Library Services; **Eleanor Silverman, AHIP**, medical librarian; and **Madeleine Taylor**, medical librarian; Health Sciences Library, St. Joseph's Regional Medical Center, Paterson, NJ; and **Elaine Brogan**, medical librarian, Medical Library & Parent Resource Center, Children's Specialized Hospital, Mountainside, NJ

Objective: The Circuit Rider Librarian Program was designed to satisfy the need for professional library services in area hospitals and to generate revenue for the library.

Setting/Methods: The medical center is a 792-bed, tertiary care teaching hospital in an urban setting that is a level 2 trauma center and a 120-bed state designated children's hospital. Within a 20-mile radius, there are many small community hospitals without librarians. The administrator at one of these hospitals approached the former director of the library requesting a formal library services consultation. After submitting her report, the administrator asked, "Can you

deliver these services?" With a positive reply, our program was born. Twenty-three years and 11 hospitals later, the success of the program is attributed to the personal, caring service all library users receive from the circuit librarian and the staff of the home library. The program is self-supporting and the income generated has become part of the library's funding and been used to partially offset recent hospital shortfalls.

Results: The circuit rider program is a success due to the customized service that all patrons receive. The circuit librarian is a valued member of each hospital's team and collaborates with administrative staff to tailor services in each client hospital. Unanticipated benefits of the program include the generation of sufficient revenue to self-fund the program, as well as contributing to the collection development, staff educational activities, and capital expenditures of the home library. The home hospital's reputation and standing in the community is enhanced by this outreach service.

Conclusion: Circuit librarians do not always travel hundreds of miles. In urban areas, a circuit program can be successful, mainly due to personalized, one-on-one, informal relationships between the librarian and the patrons. A long-term, indispensable partnership with area hospitals can be forged.

TA33

Em*Powering* the community through wireless outreach

Graciela G. Reyna, circuit librarian, and **Debra Warner, AHIP**, library director, Medical Library, Regional Academic Health Center, University of Texas Health Science Center–San Antonio, Harlingen, TX; **Mary Jo Dwyer**, outreach/reference librarian, Briscoe Library, and **Cindy Olney**, evaluation specialist, Academic Information Services, The University of Texas Health Science Center–San Antonio; **Andrew Lombardo**, assistant librarian, Medical Library, Regional Academic Health Center, University of Texas Health Science Center–San Antonio, Harlingen, TX; **Evelyn Olivier, AHIP**, deputy library director and associate director, Public Services, Briscoe Library, University of Texas Health Science Center–San Antonio; and **Santiago Villanueva**, associate regional director, Colonias Program, Center for Housing and Urban Development, Texas A&M University–Weslaco

Purpose: Open air wireless access to MedlinePlus enables outreach librarians to enhance outreach to promotores and colonia residents along the Texas Mexico Border with real time (live) demonstrations.

Setting/Subjects: Wireless access that introduces colonia residents to NLM Internet resources has a positive impact on their health literacy.

Methodology: Observational study using interviews with promotores and colonia residents.

Results: Preliminary visit to selected colonia community centers has revealed successful use of a wireless card to introduce NLM products such as MedlinePlus in sites that are still waiting for Internet connectivity. Outreach librarians have successfully trained promotores and community residents both in English and Spanish in five colonias along the Texas-Mexico Border.

TA34

MedlinePlus Go Local in Missouri: a collaborative venture using legacy data

Amanda Lynn McConnell, information services librarian, Information Services, and **Caryn Scoville, MA**, head, Interlibrary Loan, Interlibrary Loan, J. Otto Lottes Health Sciences Library, University of Missouri–Columbia

Objective: Following in the footsteps of North Carolina's NC Health Info, this poster describes Missouri's progress in developing a Go Local partnership linking Missouri health consumers to local resources from MedlinePlus health topics.

Methods: Missouri's approach to developing a Go Local site differed from North Carolina's in that Missouri already had an existing database of community resources. This database houses an amalgam of local and state resources mostly in the education and health and human services domains, utilizes the Alliance and Information Referral Systems (AIRS) taxonomy, and has a philosophy of decentralized control. Groups from multiple disciplines and organizations are collaborating to map the AIRS taxonomy to the MedlinePlus vocabulary, to institute a resource selection and review policy, to update the indexing for accuracy and consistency, and to monitor the recall and precision of search results.

Results: An initial mapping between the AIRS taxonomy and MedlinePlus vocabulary has been completed. North Carolina's Local Terms, "see reference" list, and mapping from the MedlinePlus topics to local terms were utilized. A resource review policy was instated, and a procedure for amending indexing was implemented. Missouri partners are currently involved in improving the indexing. NLM and local partners are also evaluating retrieval for various health topics. In the next phase of the project, the focus will be on selecting additional resources to enrich the comprehensiveness of the database content. Technical enhancements are also planned to improve functionality.

Conclusions: The first incarnation of Missouri's Go Local project is scheduled to go live sometime within the next year. The project has proven to be complex and involved mainly due to problems with legacy data and inconsistent indexing, but Missouri Go Local promises to aid consumers in finding pertinent local resources.

TA35

Harnessing and celebrating the publishing energy of your organization

Ellen Justice, medical librarian, Christiana Hospital Library, Christiana Care Health System, Newark, DE

Objective: To uncover, promote, and celebrate the publications of Christiana Care Health System staff and employees.

Methods: The health system medical libraries built a database of publications authored by Christiana Care staff and employees. The database is used to help quantify for the Board of Trustees how much publishing and research is being done each year and to promote publishing activities systemwide. In order to start building the database, the publications written by well-known authors were identified. Searches were conducted in CINAHL, MEDLINE, and Journals@Ovid. This initial set of publications was uploaded into Reference Manager.

Additional publications were found using searches set up with the Ovid AutoAlert feature. Now, these results are continuously added to the database. As part of systemwide efforts to promote the authors and their publications, lists of references are generated by department, formatted into Web pages, and then posted to the medical libraries' intranet page. Another promotional activity organized by the libraries has been to recognize the authors at an annual Authors' Coffee. In 2003, the libraries also sponsored a panel of speakers who provided expertise on different aspects of the publication process including copyright, getting started, using graphics, and editing.

Results: The process of capturing, organizing, and promoting organizational authors' publications developed by the libraries is a successful way to highlight publishing activities. Also, the concerted efforts to highlight organizational publications encourage more authors to alert the libraries to their efforts. Another positive outgrowth is that the librarian generates unique lists of publications that are used in other systemwide efforts to promote research and publishing and to support accreditation efforts.

Conclusions: The libraries successfully built a database of more than 800 citations representing publishing activities from authors in diverse departments. The libraries have also been instrumental in encouraging systemwide interest in publishing and research by educating staff about the publications process, celebrating authors' contributions and offering a venue to highlight their efforts.

TA36

Empowering faculty to choose

Laura Abate, electronic resources & instructional librarian; **Leah Pellegrino**, head, Cataloging and Reserves; **Anne Linton**, director, Library Services; and **Patricia Wilson**, associate director, Public Services; Himmelfarb Health Sciences Library, The George Washington University, Washington, DC

Objective: To acquaint faculty with the problems and possible solutions to the scholarly publishing crisis, Himmelfarb librarians initiated an effort to increase awareness of alternative publication venues that exist outside the commercial arena, to encourage faculty to investigate electronic publishing alternatives, and to provide a connection to open access initiatives via Web links, university participation/membership in alternative initiatives, and publicity.

Methods: Librarians faced faculty demand for more resources in medicine, science, and technology as budgets remained flat. Librarians confronted educating over 700 faculty about the limitations imposed by copyright, licensing agreements, and journal pricing structures and the potential solutions offered by alternative publishing models. Librarians employed various methods to publicize alternative publishing opportunities. Publicity was generated through email, the library newsletter, and presentations to fellows and residents when George Washington University (GWU) faculty published through open access journals. A Research Day poster was presented after BioMed Central made a presentation at the GWU Medical School. Library staff education ensured staff could knowledgeably answer faculty questions about alternative publishing. Librarians offered opportunities for faculty to learn about copyright, licensing, and pricing; increased access to alternative publishing initiatives via the Web page; and supported university initiatives and redirection of funds to support these initiatives.

Results: As evidence of university support for alternative publishing, GWU now participates in four open access initiatives (SPARC, BioOne, BioMed Central, and Public Library of Science) and supports PubMed Central via Web links. Open access publishing is gaining acceptance and interest is growing among GWU faculty. Faculty expresses concern about journal impact factors. Twenty articles have been published by GWU faculty in BioMed Central titles since 1999, and, with some duplication, twenty articles by GWU faculty are represented in PubMed Central. The library provides links from its e-journal page to open access titles and lists them in the library catalog.

Conclusions: Informal discussions with librarians show interest in alternative publishing. There was much discussion and many questions on Research Day and following the BioMed Central presentation. Librarians continue to promote and track publications by GWU faculty in alternative publication initiatives. Open access titles must show increased impact factors to maintain growth.

TA37

Faculty publications database: a practical approach to identifying collaborators

Janis F. Brown, AHIP, associate director, Educational Resources; **Chris Ewing**, information specialist; **Melissa L. Just, AHIP**, information specialist; **Joan Mircheff**, KSOMweb manager; **David H. Morse, AHIP**, associate director, Collection Resources; and **Janet L. Nelson**, Head, reference section; Norris Medical Library, University of Southern California–Los Angeles

Objective: Develop a faculty publications database to facilitate collaboration among researchers within the university in support of an increased focus on research on the campus.

Methods: Through focus group sessions, the Norris Medical Library determined that health sciences researchers at the University of Southern California (USC) have difficulties identifying potential collaborators within the university. As a practical approach to alleviate this problem, the library developed a faculty publications database that represents the research interests and expertise of the faculty. Searches of MEDLINE by author affiliation are used to identify citations authored by over 1,500 USC health sciences faculty members. To develop a more complete database, a Web-based form also is provided for faculty to add citations to other articles, chapters, and books they have authored. After the initial development, the effort to maintain the database is minimal and does not require faculty involvement to gather the data, which at best is a time-consuming process. PubMed data is imported as XML into a MySQL database. PHP connects the database to the Web. The search interface to the database allows for searching by author, title words, keywords, and author affiliation. Restrictions by date range and exact word

match also are provided. The search results provide links to abstracts in PubMed that include indication of USC print and online subscriptions to the journal.

Results/Conclusions: Throughout the development process we have encountered various obstacles that required resolving before completing the database, such as devising an acceptable institutional search hedge, dealing with PubMed data formats, handling large results sets and other display issues, etc. The database has not been available for a sufficient time to determine its usefulness. Future evaluation will include determining the number of "hits" to the search page and gathering feedback through an online survey form.

TA38

Library support for scientific writing and publishing

Theresa S. Arndt, head, Outreach Services, and **Anna Ercoli Schnitzer**, information services librarian, Taubman Medical Library, University of Michigan–Ann Arbor

Objective: Because of recurring questions from clinicians, researchers, graduate students, and health support system staff, we wanted to facilitate identification of appropriate resources to support writing and publishing scientific research and grant writing.

Methods: In July 2001, we developed an online guide for patrons and library staff based on frequently asked questions. Print and electronic resources were organized into categories including style manuals, author instructions, journal information (impact factors, abbreviations, publishers, etc.), book chapters/dissertations, copyright, grants, dictionaries, bibliographic management software, and MeSH for author keywords. Based on the popularity of the Webguide, which averaged 184 hits per month in the first four months, we developed a class open to anyone at the university. Using a self-paced, active learning approach, we gave students a series of hands-on exercises based on the guide sections, and, after a brief introduction to each section, they worked independently to find the answers, with two instructors floating to help with any questions.

Results: Although we never advertised our Webguide outside of our classes, it has averaged 300 hits per month since July 2001. Nine institutions from 4 different countries have linked to our guide. The associated class has been offered 6 times with a total attendance of 86 people. Evaluations of the class contents and format are consistently positive with many people commenting on the high relevance of this class to their interests.

Conclusions: Individuals who engage in scientific writing are not necessarily familiar with the most appropriate and effective information tools for the publishing process. The library can serve a valuable function in supporting these needs.

TA39

Strategy to promote open access scholarly communication at Tampere University Library, Department of Medicine, Finland

Saila M. Huuskonen, assistant librarian, Department of Medicine; **A. Anneli Ahtola**, library development officer, Main Library; and **Leena I. Pesonen**, head of department, Department of Medicine; Tampere University Library, Tampere, Finland

Objective: The objective is to explore the medical faculty members' attitudes toward the open access concept and to ascertain how they view the library's role in the scientific communication chain and how they envision that the concept could be best promoted and advanced.

Methods: The medical library's case is one part of a wider open access (OA) marketing strategy and awareness campaign at Tampere University Library. In spite of the library's institutional membership in BioMed Central and faculty-wide publicity, the OA publishing has been limited, however even though the faculty members publish approximately 700 refereed articles in foreign publications yearly. For this reason, it was conceived as important to investigate this issue more in depth. The case study involves two focus groups sessions, and the groups consist of researchers representing different medical fields. The purpose is to gain insight into potential differences in attitudes between disciplines. Both groups will also discuss the role the library in the scholarly communication chain and what kind of collaborative efforts could and should be utilized to successfully advance the open access concept.

Results: Attitudes toward the OA concept do not vary across disciplines. The researchers consider the rapid referee and publishing process of OA journals as major benefits, and they value the worldwide and equal access and openness of research results. Primary concerns relate to OA journals' missing impact factors, because Finnish research financing and career development are heavily dependent on publishing in high impact factor journals. Furthermore, doubts are voiced regarding OA journals' quality and reviewing principles. Scientific societies should adopt a more active role in promoting the OA concept. Libraries' essential role is seen in information and raising user awareness in all possible ways.

Conclusions: OA requires perseverance and a long-term commitment. In this light, the library's OA marketing strategy and awareness campaign is viewed as a successful choice. For the concept to succeed, the libraries' advancement role is important; however, the scientific community's attitudes and behavior are the decisive factors in future developments.

TA40

Teaching intellectual property law concepts: beyond fair use

Sara Anne Hook, AHIP, associate dean and professor, Academic Policies, Procedures and Documentation, Indiana University-Purdue University and School of Informatics, Indiana University–Indianapolis

Objective: This poster illustrates how copyright, patent, and trademark law can be taught in a powerful, effective, and engaging manner by using real-world examples and by giving students the opportunity to use the full functionality of the US Copyright Office and the US Patent and Trademark Office Websites.

Methods: As part of a graduate informatics course, students were given several real-world assignments that required them to utilize the full functionality of the US Copyright Office and the US Patent and Trademark Office Websites. These

assignments required students to search the copyright, trademark and patent databases, register several copyrights and trademarks online, and study the patent prosecution process. The hypothesis is that these assignments not only provide more meaningful student learning, but are also essential in preparing informatics graduates for careers as inventors, researchers, and entrepreneurs. The poster will include examples of actual assignments. The effectiveness of these assignments can be determined by performance on the assignments and on examination questions related to intellectual property law, from student evaluations, and by comparison to student examinations in courses that did not use these assignments.

Results: Students enrolled in two different graduate courses (health informatics and legal and business issues in informatics) have completed the patent, trademark, and copyright exercises. Students did very well on all of these assignments, with some students achieving a perfect score. Feedback from students has been very positive. Student performance on the final examination plus end-of-semester student evaluation forms will be available in May and incorporated into the poster presentation.

Conclusions: As of mid-semester, the preliminary results indicate that these assignments were effective in giving students a more meaningful view of the importance of intellectual property law in informatics through real-world experiences in using the copyright, trademark, and patent databases and Websites.

TA41

Correcting the literature after scientific misconduct: problems and potential in the biomedical electronic journal and database environments

Ellen B. Marks, director, Shiffman Medical Library, Wayne State University, Detroit, MI

Objective: Funded by the National Institutes of Health, Office of Research Integrity, this study investigated the nature and scope of corrections made to the published biomedical literature affected by scientific misconduct and will make recommendations to the appropriate entities, when warranted, by the results of the study. The poster aims to heighten awareness among medical librarians and to elicit their advice concerning the problems found in databases, electronic journal publications, and citation practices. Additionally, current policies and practices of the major biomedical publishers and database vendors will be summarized.

Methods: Our retrospective cohort study (1) identified all Office of Research Integrity (ORI) determinations of scientific misconduct from 1992–2001 and selected those individuals with ORI-identified publications containing plagiarism, misrepresentation of data or other information requiring correction, errata, retraction or similar action; (2) conducted searches in the major versions of MEDLINE to determine the extent to which errata and corrigenda are tagged and to characterize the range of the location and content of such postings; (3) described how publishers and vendors identify errata and corrections; (4) described the extent to which subsequent authors cite the problematic publications; and (4) randomly sampled the citations to the problem articles and conducted content analyses to determine the nature of the reference to the problem publication.

TA42

Empowering scholarly communication through the open access movement: a historical perspective

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

Objective: The authors will review and synthesize the literature about the open access movement in order to identify developments, trends, and forecasts for this new publishing model. The time line will promote and increase awareness about the necessity, value, and importance of the open access publishing model in scholarly communication.

Methods: Through a systematic literature review process the authors will identify relevant works on the open access movement. Major bibliographic databases for library and information sciences, as well as other appropriate databases and Websites will be searched. The text of such papers and resources will be reviewed to create a time line, highlighting national and international milestones, current status, regulations, successes, failures, and the individuals who have influenced the movement.

Results: The authors' review validates the extensive coverage and ongoing discussion in scientific communities, literature, and on the Internet regarding open access and scholarly communication. The open access movement is supported and advanced by a spectrum of interest groups and activities such as national and international organizations, publishers, individuals, and many special events.

Conclusions: While open access is gaining strength and popularity as the new model for dissemination of information, there are still many issues not completely resolved such as pricing models, peer reviewing, indexing and impact factors, archiving, and the stability of this new publishing model for scientific literature. The open access movement has had a tremendous worldwide impact and involves not only the academic and publishing communities but also many other disciplines. The authors' observation leads to the conclusion that open access will continue to evolve and will allow academic institutions to reduce overall costs while expanding the distribution of scientific information.

TA43

Power in your people: applying the experiences of BioMed Central authors to change in scholarly publishing

Mary E. Youngkin, head, Public Services, and **Jeanne Marie Le Ber**, education services librarian, Spencer S. Eccles Health Sciences Library, and **Margaret M. Landesman**, head, Collection Development, J. Willard Marriott Library; University of Utah–Salt Lake City

Objective: To support changes in scholarly communication, the medical and main campus libraries underwrote a university membership to BioMed Central/Faculty of 1000 in 2001.

Faculty members could then publish/participate without fees. This poster's objective is to formalize and report local authors' experiences, offer insights toward the transition to open access models of publishing, and identify possible new roles for libraries.

Methods: The library will combine surveys and a focus group to answer such questions as: Why did you choose to publish with BioMed Central? How satisfied were you with the experience? What problems or barriers exist to future publication in open access journals? Would you recommend this mode of publication to colleagues and students? Can you identify any new roles for libraries and librarians in this new publishing model?

Results: Results and conclusions will be presented at the meeting.

TA44

The power of new publishing possibilities: promotion of open access publishing

Jane L. Blumenthal, AHIP, director, and **Marcus A. Banks, AHIP**, associate fellow, Dahlgren Memorial Library, Georgetown University Medical Center, Washington, DC

Objective: Under the auspices of the university's Digital Library Steering Committee, we sought to educate faculty members about the pricing crisis facing scholarly journals and to encourage the alternative of publishing in open access peer-reviewed journals. This effort began within the medical center, and extended across campus throughout the course of the 2003/04 academic year.

Methods: To raise awareness and facilitate submissions to open access journals, the medical library paid for an institutional membership to BioMed Central. For National Medical Librarians Month, we held a brown bag luncheon about open access publishing and created a Web page of relevant resources. Working with the medical center's communications department, we placed articles in the newsletter throughout the year about licensing, cost increases, publication of *Public Library of Science Biology*, and other relevant issues. We met with the medical center leadership and made presentations to faculty committees on the library, and research. We also held personal conversations with key faculty members to ascertain their perspectives regarding open access publishing. This outreach to medical center faculty served as the foundation for campuswide efforts designed to culminate in a symposium focusing on open access publishing in the fall of 2004.

Results: From its initial focus on open access publishing, this project evolved into a broader focus on scholarly communication. A campuswide Task Force on Scholarly Communication—comprised of representatives from the medical, university, science, and law libraries—drafted a white paper that delineated numerous facets of the challenges and possibilities presented by new means of scholarly communication. This paper was targeted to the concerns of faculty regarding tenure and promotion, and coordinated with the effort to construct a campuswide digital library. It will serve as the background for a campus conference about scholarly communication in the fall of 2004.

Conclusions: While it is too early for us to draw definitive conclusions, this effort has engaged the attention of some faculty members. We hope over time to generate interest in a core group of faculty who will become the catalysts in a campuswide exploration of new possibilities for scholarly communication.

TA45

The Association of American Medical Colleges (AAMC) Council of Academic Societies (CAS) journal study: implications for scholarly communication in the health sciences

Gary D. Byrd, AHIP, director, Health Sciences Library, University at Buffalo (SUNY), Buffalo, NY, and **Shelley A. Bader, AHIP**, associate vice president, Educational Resources, Himmelfarb Library, George Washington University Medical Center, Washington, DC

Objective: This research project, jointly supported by the Association of Academic Health Sciences Libraries (AAHSL) and the Association of American Medical Colleges' (AAMC) Council of Academic Societies (CAS), has the goal of analyzing the publishing policies and economic impact of the journals published by or for CAS member societies.

Methods: Using the data-gathering efforts of staff in AAHSL member libraries and temporary staff hired by AAMC, detailed information has been collected about some 111 journals published by or for CAS member societies (75 of the 104 member societies publish or sponsor journals). The database includes over 50 data elements about the most recent 5 years for each journal published, in the following categories: bibliographic, policy (e.g., licensing, archiving, author misconduct, article retractions), electronic version, pricing, ISI impact factor, and subscriptions data. These data reside in a secure Web-accessible database maintained at the University at Buffalo (SUNY). In addition to the data gathered from public sources (journal issues, Websites, and databases), each CAS member society has been asked to verify and provide additional data to complete the database. An advisory committee for the project including AAHSL librarians, CAS journal editors and publishers, an economist, and AAMC staff met in early March to review the project goals and data and to suggest additional data gathering, analyses and reports.

Results: The poster summarizes the statistics and policy data collected for these academic health sciences society journals as of May 2004. It also outlines the additional research objectives formulated for the project by the advisory committee. These include understanding each society's publishing objectives, publishing practices, measures of journal success, sources of journal financial support, as well as editorial and marketing objectives.

Conclusions: This research has been strongly supported by AAMC and CAS, because they recognize that journals published by academic societies face uncertain economic times caused by competition from commercial publishers and pressure to move to untested online open-access publishing models. These research results should also help health sciences libraries understand and support our academic society partners during this transition from paper journal subscriptions to online, more open access publishing.

POSTER SESSION 3

Tuesday, May 25, 2004, 4:30 p.m.–6:00 p.m.

TP01

The power of community: evaluating HLIB-NW, a regional discussion list

Maryanne P. Blake, education/communications coordinator, National Network of Libraries of Medicine, Pacific Northwest Region, University of Washington–Seattle

Objective: A literature search reveals that there are few studies evaluating discussion lists. Since 1993, HLIB-NW has been an active electronic discussion list in the Pacific Northwest. Is HLIB-NW an effective tool for building community among health sciences librarians and for serving those interested in health information and health sciences libraries in the Pacific Northwest?

Method: An online satisfaction survey will be conducted for HLIB-NW subscribers. A Web-based survey for non-HLIB-NW members in the region will also be conducted. Interviews with several HLIB-NW members will be conducted on the phone. Additionally, historical descriptive data from the discussion list archives and records will be analyzed. Results of the surveys, the interviews and the archive analysis will help to understand why this discussion list has remained active for more than ten years and what improvements can be made.

Results: Survey results, interview comments, and statistics show HLIB-NW is an effective tool for serving its members. and it builds community among them. Of survey respondents, 90.2% said HLIB-NW is relevant to their work and 62.7% said they used it to communicate with colleagues. All respondents found it either very valuable (48%) or somewhat valuable (52%). Considered most useful was getting opinions and ideas from colleagues (70.9%), help with difficult interlibrary loans (35%), and difficult reference questions (50.5%), activities needing communication between colleagues. Interview comments support these findings, "this is my lifeline to other librarians," "useful portion of HLIB for me is having access to other professional librarians at my fingertips," and "I learn a lot from the conversations other librarians have on the list." Suggestions were also solicited to improve the list, among them "it's great as it is, don't change" and "make people use the subject line more effectively." One comment on the survey was "not too many messages." This is supported by the statistics in 2003 showing an average of seventeen messages per week.

Conclusion: The HLIB-NW discussion list is an effective tool for serving its subscribers and building community among the group. Characteristics of the subscribers may influence the success of the list.

TP02

Strengthening professionals: a chapter-level formative evaluation of the MLA mentoring initiative

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

Objective: The main objective was to determine the extent to which the MLA mentoring initiative was implemented in an MLA chapter and to identify the needs, improvements, and adjustments in mentoring services for the future to improve the practice of librarianship.

Methods: The data was collected by administrating an anonymous survey designed by the authors. The majority of questions employed interval levels of measurement using a Likert response scale. Some questions were dichotomous; a few were open-ended. The survey was mailed to all 336 chapter members. A follow-up mailing was also administrated. Using the structured survey, the authors elicited responses to determine the mentoring needs of chapter members, the awareness of available resources, satisfaction with existing services and resources, the needs for the future, and suggestions to meet the needs. The data were analyzed using basic statistical methods, which allowed reporting outcomes in descriptive and graphical forms.

Results:

- Out of 335 delivered surveys, 184 were returned, yielding a return rate of 55%.
- The majority of responders, 59%, were from academic libraries, and 27% were from hospital libraries.
- Eighty percent had a mentor or mentors in their careers, and 74% were either very satisfied or satisfied with the relationship. The majority consider having a mentor a critical part of the professional experience.
- The mentoring activity, chosen by respondents as the most important, was the improvement of job performance through skills development.
- Over 50% were aware of South Central Chapter (SCC)/ MLA's mentoring activities, and less than 50% were aware of MLA's mentoring Website.

Detailed findings will be available in the poster presentation.

Conclusions: The rate of response and the wealth of comments provided by responders document the high level of interest in mentoring by medical librarians in the region. The following mentoring services are equally important to SCC members and are deserving of improvement or development at the regional level:

- a formalized mentoring program in the region
- Web-based mentoring resources on the SCC Website
- continuing education course for mentors

Members are aware of mentoring activities in the region; however, there is a need to increase participation levels in activities that the South Central Chapter provides.

TP03

A model for recruiting and educating from within libraries

Nunzia B. Giuse, AHIP, director; **Annette M. Williams**, associate director; and **Margaret Westlake**, assistant director, Staff Training; Eskind Biomedical Library, Vanderbilt

University Medical Center, Nashville, TN; **Ellen G. Detlefsen**, associate professor, Information Science, School of Information Sciences, University of Pittsburgh, Pittsburgh, PA; and **Taneya Y. Koonce**, assistant director, Web Team, Eskind Biomedical Library, Vanderbilt University Medical Center, Nashville, TN

Objective: To develop and evaluate an educational pathway for recruiting and educating librarians that draws on the strength of a well-established library internship and a long-distance library and information science degree program.

Setting/Participants/Resources: A large academic biomedical library and a long-distance library and information science degree program.

Description: At a time when a shortage of professional librarians has been identified, there is an opportunity to recruit for medical librarianship from within the pre-professional segment of biomedical libraries. With funding from a national federal agency, this library will create, in collaboration with a library school distance-learning program, a workable model for training that offers an exciting alternative to the traditional librarianship-training paradigm. While in the past much of the training has occurred in the classroom, it has become clear that the breadth and depth necessary to be successful in a biomedical library is often limited by formal curriculum and program constraints. This library will partner its internship program with a long-distance library degree program to provide advanced training for new librarians in the health sciences and biomedical informatics, thus providing a means of applying theory to the work environment.

Results: Individuals were selected for participation in this three-phased project based on excellent performance in initial training and high ratings by peers and superiors, as well as commitment to pursuing an advanced degree in librarianship. During phase 1, pre-professionals complete a series of in-depth learning modules designed by experienced librarians and other professionals to equip library informationists with practical skills. The second phase focuses on completion of a fast-track master's of library and information science distance program and practica at the home institution. The project concludes with a library internship for intensive development and application of advanced skills in librarianship, information synthesis, and project management.

Conclusions: The tremendous shortage of health sciences information professionals, coupled with an understanding of librarians' dramatically changing roles, demands innovative approaches to recruiting and training. The proposed model meets those requirements with a parallel approach to learning that fully integrates theoretical coursework into a practical work environment.

TP04

Improving performance through an internal internship

Tracie Frederick, electronic resources librarian, Dahlgren Memorial Library, Georgetown University Medical Center, Washington, DC

Objective: The purpose of this project was to provide a professional development opportunity for an information services librarian that would make her capable of assisting three library departments in the event of a manager's extended absence. The knowledge of operations and technology gained during this "internal internship" also helped to improve the librarian's performance of many of her regular work responsibilities.

Methods: For ten months, the work of an information services librarian at an academic health sciences library was divided between her regular responsibilities and an "internal internship" with three library departments. This internship was a combination of an internally developed training program supplemented with two external courses taken online. It began with approval of the internship proposal by the library director and department managers, who then developed objectives and projects for each portion of the experience along with the librarian. The librarian accomplished the objectives by shadowing staff, reading and writing documentation, and completing the projects to learn all aspects of the operations, policies, and procedures of the departments. Gaining proficiency with technology was a focus of this internship; however, online coursework completed during two month-long seminars provided additional education concerning copyright and licensing issues.

Results: At the completion of the project, it was intended that the librarian would serve as a backup to managers in each department, if there were an extended absence. However, there were many added benefits that helped her to be more effective in her regular responsibilities and in answering patron questions at the Reference Desk. Although modifications were made to the original plan for the internship, the goal of the project was still accomplished and lessons from the experience were considered in the planning of an NLM fellow's training.

Conclusions: Because of the professional development rewards and benefits gained for the library, this is a worthwhile experience for librarians and staff working within a library that has the flexibility to arrange this type of experience.

TP05

Power of history, power of words

Diane McKenzie, AHIP, collection development librarian, Health Sciences Library, University of North Carolina–Chapel Hill, and **Marlyse Hickman MacDonald**, information & education services librarian, Duke University Medical Center Library, Duke University, Durham, NC

Objective: The mission of the Medical Library Association Oral History Project is to document, preserve, and promote the history of the association and of the profession using interviews and oral history methodologies. The poster objectives are to promote use of the oral history interviews and to encourage participation in the project.

Methods: The poster will discuss the MLA Oral History Project and give examples of the type of non-standard and often otherwise unavailable information that can be found in an oral history. Some examples may be presented as oral sound bites. Examples will include both older well known figures such as Gertrude Annan, recent leaders, such as Robert Braude, AHIP, FMLA, and less well-known librarians such as Jean Antes Pelley, AHIP, FMLA. The poster will illustrate the range of qualitative research skills used in conducting, editing, and indexing oral histories. Examples will also illustrate

collaboration with other groups. The poster will also show examples of how the interviews collected by the project can be used to support proposals and presentations or form the basis for library or ethnographic research. It will also suggest future approaches to mining and linking the information in oral histories.

TP06

LibQUAL+: the dynamo of quality assessment

Alexa Mayo, AHIP, assistant director/IIS, and **Christian Miller**, information specialist, Health Sciences and Human Services Library, University of Maryland–Baltimore

Objective: This poster will report on the changes and activities that followed implementation of the 2002 LibQUAL+ survey. Possible future changes will also be discussed.

Methods: LibQUAL+ assesses a library's affect of service, access to information, library as place, and personal control. The library's interpretation of the results identified areas for improved service and confirmed areas where the library was already initiating improvement. Survey results indicated the need for more full-text resources, better access to these resources from any location, and improved service desks. The results affirmed that the library was spending its resources wisely in its work already in progress with full-text collections. The Service Desk Improvement Committee was formed in January of 2003 to identify service issues at each of the three service desks and recommend changes. This poster will report on the recommendations.

TP07

Withdrawn

TP08

The power of current awareness: evaluation of an in-house table of contents service at a health association

Cynthia R. Kahn, manager, and **Marian Taliaferro**, assistant reference librarian, Reference Center and Archives, Association of American Medical Colleges, Washington, DC

Objective: This poster examines an in-house current awareness or table of contents (TOC) service at a non-profit health association.

Setting/Participants/Resources: The Reference Center at the Association of American Medical Colleges (AAMC) is staffed by two full-time librarians and one part-time library technician. Reference Center staff produce a weekly TOC service based on the print journal collection, which is delivered to self-selected association staff each Monday morning.

Brief Description: Costs for the service include staff time, photocopy charges, and delivery charges and runs over $5,000 per year. The librarians developed a survey to evaluate staff opinion of the service as well as interest in other delivery methods, such as an electronic service. Small changes were made to the service after the survey, such as splitting it into two services organized by topic, although the format and method of delivery remained unchanged. The electronic delivery method was rejected based on cost and lack of staff interest. A posttest survey will be run eighteen months later (January 2004) to see how these changes affected staff use and opinion of the service.

Results: The pretest survey was conducted in March 2002. The survey elicited the following data: over 66% of staff who chose to receive the TOC weekly service report reading it regularly, 82% find it to be either "definitely useful" or "useful," and 57% report their work would be affected if they did not have access to the service. Comparison data were obtained 2 years later in March 2004. Please note: many fewer staff responded to the follow-up survey, which impacts the validity of the comparison. Nevertheless, over 50% of staff who chose to receive the TOC weekly service report reading it regularly. That number climbs to 93% when combining those who read it regularly and those who read it infrequently (interpreted by most as "sometimes"). Seventy-three percent find it to be either "definitely useful" or "useful," and 60% report their work would be affected if they did not have access to the service.

Conclusion: The TOC service will continue as a print service according to the preferences of the association staff. The original survey, done in 2002, guided the Reference Center staff in making changes to the TOC service. The biggest change was moving from one to two separate services based on subject. Instead of one service with all titles, there are now two professional services: TOC Week and TOC Management. TOC Week covers all subject journals in health care, higher education, and social science. The new service, TOC Management, includes only the business or management titles received by the Reference Center. It was truly the preference of the management/business readers to have this separation. Staff continue to self-select the services to which they subscribe with some choosing to subscribe to both. Since that time, a third service has been added for the administrative assistants on staff. The TOC Admin service is not a self-select service; all administrative assistants automatically receive the TOC Admin once a month. Between all three services, nearly 50% of association staff receive at least one of the TOC services. This is beneficial to the Reference Center, as it increases staff use of the Reference Center collection in print and electronic format.

TP09

Can your library improve its services? You bet your BIPS!

Karla J. Block, AHIP, head, Access and Outreach Services, Bio-Medical Library, University of Minnesota–Minneapolis

Objective: This poster reports on the creation and activities of an informal service improvement project initiated by library staff.

Methods: The Bio-Medical Library offers rich collections and many library services, along with a strong tradition of customer service and teamwork. A shared goal throughout the library is to build upon this tradition by improving services to patrons. Two librarians in Public Services approached other staff with the idea of an informal service improvement committee and were met with enthusiasm. Thus, the grassroots effort "Bio-Med Improving Public Services," known as "BIPS," was created. Volunteers were solicited from all units and from full-time and student staff. Approximately seventeen people representing several units and all job classes answered the call for volunteers. The committee operates informally and under no charge other than its self-explanatory name. Few formal meetings are held; most work is conducted informally. Staff are

encouraged to submit suggestions, from big to small, mundane to exciting. Patron comments are also incorporated.

Results: BIPS has yielded promising long-term ideas and practical short-term suggestions. Even before its first meeting, BIPS was involved in several activities to improve library services, including improved exterior signage, a free "pull and hold" service for books, and installation of suggestion boxes in staff areas. Future plans include activities that might be carried out primarily by BIPS as well as initiatives to be undertaken in collaboration with others in the library, the university libraries, or the Academic Health Center. Such activities include: student employee surveys and/or exit interviews, improved signage and study space, advanced training for students working in the stacks (to improve patron assistance and referrals to resources/ services in the library), and more.

Conclusions: Although a more formal customer service initiative is underway in the library, BIPS will continue to operate as an informal mechanism for improving services. It is anticipated that this effort will continue to increase collaboration and creative thinking. The process empowers staff to become more conscious of and actively involved in improving the library's services. A very simple idea for an informal group has proved to be a powerful way to generate ideas for service improvements.

TP10

Connectivity and computer questions, improving practice through question analysis

Kurt Munson, head, User Services; **Linda Walton**, associate director; **Linda O'Dwyer**, education librarian; **Stephanie Kerns**, head, Education Department; and **Mark Berendsen**, education librarian; Galter Health Sciences Library, Northwestern University, Chicago, IL

Objective: Roughly one third of the questions at the reference desk concern electronic resources, services, or computer help. Increasingly resources are available electronically only, accessible remotely, and require greater technological skills on the part of users. The library needed to gain a better understanding of these questions to improve service both to provide point-of-need assistance and to troubleshoot users' problems.

Methods: Staff developed a Microsoft Access database and logged every question received at the desk. Database fields noted the user's affiliation, how the questions was received, the time required to answer the question, and if the reference staff answered the question or referred it to another department. The actual question was entered in a text field. Questions were categorized as connectivity, hardware, printing, or library services. Staff entered every connectivity question received into the database. Data was collected every other month over one year. The data analysis determined which populations present the most connectivity questions, which resource types or services generate the most questions, users' preferred method for seeking assistance, and the most common cause of the user's problem. Further analysis tagged questions to determine each problem's source, i.e., proxy problems or publisher site for example.

Results: Analysis of 440 questions showed 48% involve connecting to resources; 29% involve library services; 13% and 9% entail printing or hardware questions respectively. Further analysis showed 46% of connectivity questions involved electronic journals and 22% related to databases; 38% of the connectivity problems resulted from publisher problems and 22% proxy issues.

Conclusions: Better Website based point-of-need assistance should ease connecting to resources especially if publisher site-based problems are indicated. The proxy server needs better maintenance to ensure resources are included. Library services need to be simplified or explained better to users to improve usability.

TP11

Unleashing the power of the reengineered matrix: redefining project management

Nancy G. Burford, resources management librarian, and **Heather Goetz**, serials and electronic collections coordinator, Medical Sciences Library, Texas A&M University–College Station

Objective: Maintenance of an online collection requires a substantially higher level of technical expertise than traditional print collection management activities. The move to "online only" for nearly a third of our journal subscriptions greatly reduces the workloads of staff responsible for serials check-in, claiming, and binding. These staff, however, lack the skills or expertise necessary for managing electronic resources and their records. At the same time, the bibliographic and electronic resource staff are overwhelmed and need assistance. This poster demonstrates an approach to project management that is effective in an environment where limited technical skill sets are available.

Methods: In this situation, it was impossible to continue the customary approach to project management, that of identifying available staff and assigning them to the project. In the past, when specific technical skills or knowledge was required, we often worked in two-person teams, one member with the needed expertise and the other as a helper. We needed a solution to the chasm that existed between available skills and those needed for the project. Our answer was to reengineer the matrix, so that instead of matrixing staff resources to the project, we matrixed elements of the project work to the available staff. We analyzed the work needed, grouped similar project elements together, segmented the bibliographic and complex record management tasks into small groupings, and developed sets of pre-programmed function keys to simplify record management work.

Results: Available staff as well as student assistants are quickly trained to work on projects. Productivity is impressive. In a project to add classification to online journals, they edited almost 2,200 bibliographic records in about 60 hours over a period of 3 weeks.

Conclusions: Quality control for this approach to project management involves record review by experienced bibliographers. Error rates will be calculated and reported in the poster.

TP12

Questions asked at the virtual and physical reference desk: how do they compare and what do they tell us?

Sandra L. De Groote, AHIP, assistant information services librarian, Information Services, University of Illinois–Chicago

Objective: The purpose of this study was to compare the types of questions asked and the demographic categories of the users of the virtual reference desk versus the physical reference desk.

Methods: A health sciences library at a large urban university offers reference services seven days a week in-person and over the phone. Within the last year, a digital reference service was introduced offering both chat and email reference. Faculty, students, staff, and community members may use both services. Over a two-month period, the types of questions asked through traditional (in-person, phone) and digital (email, chat) venues were coded. The types of questions asked through the two reference venues were compared to determine correlations between users' information needs, demographics of the users, and the type of reference service chosen (traditional versus digital). Coded information was entered into a spreadsheet to determine frequency. It is expected that the types of questions asked via traditional reference varied from the types of questions asked via digital reference.

Results: The most frequently asked questions were related to library policy and materials held by the library. In-person was the most common way to submit all types of questions, with the exception of citation verification, in-which users were most likely to phone the library. How to find articles on a particular topic was the most common form of question asked by patrons using chat. Questions related to electronic journals and media items were the most common questions asked through email. When patrons phoned the library, the questions were usually related to hours, location, and library services.

Conclusions: The results of this study provide insight into the types of questions being asked via digital reference and traditional reference. Although the majority of questions are still asked in person, definite patterns emerged showing that some questions are more likely to be asked in certain venues. This information will prove useful when training staff, developing help guides, and providing instruction.

TP13

Seeing is believing: using video to assess instruction librarians

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: In the past few years, librarians have become leaders in teaching the broad concept of "information literacy." But how do we know if we are succeeding in helping our students and faculty learn the necessary concepts and skills for lifelong learning? To help determine the effectiveness of our teaching, the instruction librarians decided to initiate a teaching assessment program.

Methods: Setting: A small academic health sciences library serving a college of pharmacy and three allied health programs.

Population: Instruction librarians with various backgrounds and years in librarianship.

Design: As an initial step in the program, we decided to look at ourselves through our students' eyes and learn from what we observed. We videotaped instruction librarians in various classes, and presented the video to that instructor *only.* It was up to the individual to share it with the other instructors. Criteria were developed to evaluate each performance. After permission was granted from the videotaped person, the department viewed the videos. Each person then used the criteria to evaluate each librarian. The results were given *only* to the person involved. Again, if he or she wished to share those results with the group, that was done, and further discussion took place.

TP14

To merge or not to merge: a study on the value of maintaining multiple physical service points in today's changing environment

Kristin Hitchcock, academic resident librarian; **Sandra De Groote, AHIP**, assistant information services librarian; **Richard McGowan**, academic resident librarian; and **Deirdre Rawls**, visiting information services librarian; Information Services, Library of the Health Sciences, University of Illinois–Chicago

Objective: As electronic resources and online services continue to expand, the Information Services Department examined the value of multiple service points within the library. In order to improve reference services and adapt to new patterns of library usage, merging of service points was examined.

Methods: Staff provided evidence of decreased traffic and questioned whether there is still a need for two information services desks, because online services are expanding. A task force examined this issue by interviewing library personnel, studying usage statistics, and considering implications of merging the two physical service points (i.e., patrons' perceptions and expectations, staffing patterns, remodeling, and funding for the transition.) It is expected that the two physical service points will be merged.

Results: Nearly 40% fewer questions were asked at the Information Desk in 2002/2003 than in 1997/1998. During this same period Reference Desk questions fell by 51%. Merging desks would likely increase numbers of directional questions fielded by librarians, considering these comprise a significant portion of questions at the Information Desk. Improved signage is being created to reduce this burden. Merging desks would reduce demands on library personnel with primary responsibilities in other departments and would heighten librarians' profile, two concerns expressed during staff interviews. In light of these and other considerations, the service points will be merged into one Information Services Desk.

Conclusions: Usage statistics have significantly fallen at both Information Services desks. Merging service points will allow for better use of library personnel, more prominent librarian presence, and more consistent levels of service. This study illustrates the value of regularly reevaluating physical layout in order to provide the best service to library patrons.

TP15

Withdrawn

TP16

Duster power: eradicating clutter in preparation for a three library merger and move

Sylvia Contreras, assistant director; **Micaela Sullivan-Fowler**, head, Historical Collections; and **Jodi Iverson**, library services assistant; Health Sciences Libraries, University of Wisconsin–Madison; and **Marla Cilley**, president, FlyLady.net, FlyLady and Company, Ellendale, TN

Objective: This poster will describe the process utilized in decluttering and organizing offices and their occupants, as well as consolidating the files of three existing libraries, in anticipation of merging into one newly constructed facility.

Methods: In order to merge and move three libraries efficiently and to minimize the transfer of clutter from existing facilities to the new facility, a sub-committee was formed to develop a plan to eradicate clutter. An office organization plan was adapted from the FlyLady Home Organization System and the Kiss It Goodbye Campaign developed by the University of North Carolina-Chapel Hill. The Kiss it Goodbye Campaign was launched, and staff were encouraged to weed their work-areas, files, electronic files (email and other documents), and personal belongings for fifteen minutes a day. The daily fifteen minutes sessions allowed staff to take baby-steps toward achieving a clutter-free environment and assist them in establishing routines. The FlyLady Home Organization System was introduced to staff; a record retention policy was enhanced, an archives retention policy was created; office zones were developed; and weekly decluttering missions were established. Units were assigned a weeding representative to assist staff with the weeding, archiving, and recycling process.

TP17

Trading spaces: planning for offsite storage at the University of California–San Diego

Susan Starr, director; Barbara Slater, AHIP, capital projects coordinator; and Anne Prussing, associate director, Collections & Access; Biomedical Library, University of California–San Diego, La Jolla, CA

Objective: An upcoming building project required us to store 50,000 frequently used volumes offsite in an existing storage facility already housing 90,000 low use items. We needed a methodology to (a) identify volumes for storage, (b) determine cost-effective methods to retrieve them for users, and (c) create data that could be used in future offsite storage decisions.

Methods: In order to identify volumes for storage, we collected data on the nature and use of the collection, including the age of materials, frequency of reshelving, and availability of electronic access. Demand for retrieval from storage was forecasted using a variety of models, and the resulting data were used to calculate the costs and viability of various retrieval methods; paging was determined to be the most cost-effective method. An online form was created to permit users to request materials from their desktop and permit staff to track the number and titles of requested materials. The move itself was carefully planned and coordinated to assure that the correct volumes were moved, and OPAC records changed to reflect new locations.

Results: Our projections of demand for retrieval were correct; the number of requests varies, averaging around 100 per day but sometimes running as high as 300 per day. Data on the number of volumes paged, the distribution of titles requested, and user acceptance will be presented in the poster as well as some of the unexpected problems that arose and our publicity techniques.

Conclusions: Careful planning and analysis can mitigate some of the negative effects of offsite storage.

TP18

PR power for a library on the move

Erika Sevetson, information services librarian; **Michael Venner**, information services librarian; **Sylvia Contreras**, assistant director; and **Natalie Norcross, AHIP**, assistant director; Health Sciences Libraries, University of Wisconsin–Madison

Purpose: This poster will report on the work of the Public Relations (PR) Committee to prepare staff and constituents for the merger and move of the libraries into a new building.

Setting/ Participants: A large academic health sciences library, comprising three locations.

Brief Description: The PR Committee was one of several committees formed to prepare for a library move and merger. The committee was charged with ensuring that information regarding the new building and move be communicated internally to all staff and externally to our users and to other campus libraries. Goals (short- and long-term) and ground rules for meetings were set, and communication vehicles as well as a user base (primary, secondary, and tertiary patrons) were defined. A marketing campaign will highlight library services, staff accomplishments/availability, and the new facility. This campaign will be directed at four core groups: students, faculty, researchers, and health care providers employed by the university.

Results/Outcome/Conclusion: The PR Committee has been responsible for unifying the messages sent to staff and users. Accomplishments to date include a building Website and FAQ, a "rumors" page on the staff intranet, several articles in the library newsletter, news items on the libraries' Website, and consistent signage around the libraries. The marketing campaign will use the opportunity provided by a new name, location, and facilities to rebrand our services. The committee's efforts also will be important after the merger of the three libraries, as we continue to focus our message.

TP19

License to fill: seizing the power and providing patrons with materials from a remote storage facility

Melanie J. Norton, interlibrary loan librarian, and **Adam S. Vardaman**, interlibrary loan lending assistant, Resources Management, and **Carol Jenkins, AHIP, FMLA**, director, Health Sciences Library; University of North Carolina–Chapel Hill

Objective: To review pertinent factors and share the lessons we learned for planning and accessing materials from an off-site storage facility during renovation.

Methods: With today's rapidly advancing technology and increasing demand for information, many libraries are experiencing the need for more space. In preparation for renovation at the Health Sciences Library at the University of North Carolina-Chapel Hill we decided to place all pre-1992 materials in an offsite storage facility. The number identified was 107,800 monographs and 182,200 journals. While these items were in storage, we continued to meet user needs by accessing books and providing articles from stored journals. Data collected on the most-asked-for journal titles as well as the years requested and the total number of requests will be shared. This poster will examine factors to consider when moving a library collection to an off-site facility such as assessing the collection to be moved, the level of service that needs to be provided, and the costs of providing access versus ordering on interlibrary loan. Whether a library is undergoing renovation or trying to free up space, our experience dealing with an off-site storage faclity may be helpful to other health sciences libraries.

Results: We underestimated the demand for older material. We received over 10,000 more requests than expected. Twenty-four hour turnaround times became impossible due to the volume of requests. Our service was free. Given free service, patrons could order anything they might use and decide later if the item was needed or not. As a result our workload increased, necessitating extra staff and exceeding cost expectations. The storage facility we used was not equipped to handle the 13,000 requests. As a result, we experienced delays in delivery and frustration with quality of service.

Conclusions: Lessons learned from our off-site storage experience: Never underestimate the value of and demand for older materials. Consider a small copy fee to help limit the volume of requests and to offset service costs. Find a storage facility that can accommodate your needs and meet expectations.

TP20

The combined power of metadata standards and controlled vocabularies in the Health Education Assets Library (HEAL)

Shona R. Dippie, associate research librarian and metadata specialist/cataloger, and **Sharon E. Dennis**, librarian, Eccles Health Sciences Library, University of Utah–Salt Lake City; **Sebastian Uijtdehaage**, assistant professor, Medicine, and assistant director, Instructional Design and Technology Unit, David Geffen School of Medicine, University of California–Los Angeles; **Chris Candler**, associate dean, Education, assistant professor, Medicine, and director, Office of Educational Development and Support, College of Medicine, University of Oklahoma–Oklahoma City; and **Sandra A. McIntyre**, program manager, David Geffen School of Medicine, Office of the Dean, Center for Education, Development, & Research, University of California–Los Angeles

Objective: The Health Education Assets Library (HEAL), a digital library project, was undertaken to provide free, high-quality digital materials that meet the needs of today's health sciences educators and learners while respecting ownership and privacy. The project team developed and subsequently refined a custom metadata specification including domain-specific extensions with controlled vocabularies to accommodate new features and more complex multimedia, enhancing accessibility and resource management.

Methods: High-quality metadata was crucial to the federated library collection model, which used metadata shared via Open Archives Initiative protocols or other means. Dublin Core compliance facilitated the creation of metadata crosswalks to translate from other standards to the project's custom schema based on the Instructional Management Systems standard. The project schema had twelve required metadata elements including title, contributor, and location. Optional metadata elements designed to meet the needs of the health sciences community included such items as radiograph type, disease/process, and clinical history. A refined schema and specific policies were developed to address advanced system components, more sophisticated multimedia learning objects, and other issues the team identified during the cataloging and federation-building processes. Controlled vocabularies like the Medical Subject Headings (MeSH) were implemented to improve information retrieval and reduce obstacles to metadata record-sharing.

Results: According to Website logs, the HEAL metadata schema has been downloaded by over 300 users since its release. Over a half a dozen institutions that are developing internal multimedia resource databases have adapted the schema for local use. We anticipate releasing an updated version based on user feedback by the fall of 2004. HEAL has been designed to facilitate the sharing and accessibility of a wide variety of multimedia resources located on many remote servers. The application provides educators with a single powerful search index and interface through which they can simultaneously query multiple collections.

Conclusions: The HEAL metadata schema is the foundation for the digital library; the schema is based on international standards and includes a health sciences specific extension. It is the mechanism for enabling metadata sharing with partner collections. Controlled vocabularies further this goal by enhancing metadata accuracy and consistency.

TP21

Librarians empowering health science educators: collection development in an international multimedia digital library

Sharon Dennis, librarian, Multimedia Development, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City; **Sandra McIntyre**, program manager, David Geffen School of Medicine, University of California–Los Angeles; **Shona Dippie**, librarian, Multimedia Development, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City; **Joy Summers-Ables**, head, Library Computing and Information Systems, and **Shari Clifton**, associate professor and head, Reference & Instructional Services, Robert M. Bird Health Sciences Library, University of Oklahoma–Oklahoma City; **Sebastian Uijtdehaage**, co-director, HEAL Project,

David Geffen School of Medicine, University of California–Los Angeles; and **Chris Candler**, co-director, HEAL Project, School of Medicine, University of Oklahoma–Oklahoma City

Objective: An international digital library called the Health Education Assets Library (HEAL) was created to provide health sciences educators with high-quality, freely available multimedia teaching resources. HEAL initially housed a small prototype collection. The formation of a federation of international partners ensured the growth of the collection. A collection development policy guided acquisition of new collections and articulated the planned breadth and depth of the collection.

Methods: The collection development policy included a prioritized list of subject areas as well as collection development criteria, metadata policy, accessioning workflow, and terms of participation for each partner. Federation partners were identified through postings on email discussion lists and networking at conferences. Collections were chosen to fill important needs within the digital library. Collections with complete metadata were brought into the digital library in one of two ways, depending on the technical capabilities and preferences of the partner: (1) setting up periodic metadata harvesting using the Open Archives Initiative (OAI) protocol, or (2) building a Web service that returns results on the fly from a partner's collection. Other collections were assigned metadata by the team's cataloger with subject headings using a controlled vocabulary. Unsolicited contributions were accepted through a Web-based form, with basic metadata supplied by the contributor, completing the four-pronged accessioning approach.

Results: Three collections were added to the HEAL digital library using a combination of OAI metadata harvesting, Web services, and screen scraping. Justification for each method will be presented.

Conclusions: Working with each collection partner required a different set of interactions and technical skills. In some cases, extensive metadata needed to be added to the multimedia items; in other cases, the metadata could be harvested directly from the partner's collection. Cataloging and subject-specific expertise was critical to the success of the project.

TP22

Neuro-Ophthalmology Virtual Education Library (NOVEL) Project

Nancy T. Lombardo, systems librarian, and **Valeri Craigle**, digital resources librarian, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objective: This poster will present a virtual library project, digitizing and archiving neuro-ophthalmology materials with funding from a three-year Information Systems Grant from NLM. The project aims to digitize significant collections of slides, video, and other media pertaining to neuro-ophthalmology and make them available and searchable to educational users via the Web.

Methods: The project is a collaborative effort between an academic health sciences library and the North American Neuro-Ophthalmology Society (NANOS) and has been seeded with the collections of two prominent neuro-ophthalmolgists. Slides, video, and animated material from these collections and from individual faculty around the world will be solicited and digitized to create a comprehensive digital collection covering the core neuro-ophthalmology subject areas. All material will be peer-reviewed by content experts. The collection will be searchable with metadata conforming to the standard set of fields in the Dublin Core. The entire collection will be contributed to the Health Education Assets Library (HEAL), which is a national multimedia database of health sciences multimedia materials. The Neuro-Ophthalmology Virtual Education Library (NOVEL) collection will also be accessible via the Web, where users will be able to browse by subject, collection, or case. This organized and indexed collection will be a valuable asset to neuro-ophthalmology educators, students, and patients.

Results: More than 800 slides and 100 videos have been added to the collection. The ContentDM database is used to manage the collection and attach metadata. Neuro-ophthalmology is not well served by Medical Subject Headings (MeSH), so the project team is working with the NANOS to create a thesaurus to serve as controlled vocabulary for subject headings. The NANOS Web Education Committee has begun the peer-review process and procedures are being established to accomplish that task most effectively and efficiently. New collections are being solicited to expand the depth of the project.

Conclusions: The NOVEL project is in the first of its three-year, grant-funded period. It is well on the way to establishing a significant collection of digital neuro-ophthalmology materials for educational purposes. Collecting accurate, comprehensive metadata and establishing working vocabularies have been the most challenging and time consuming aspects of the project.

TP23

Building a better Website through a collaborative Web development process

Barrie E. Hayes, systems development librarian; **Barbara Lynn Eades, AHIP**, Web development librarian; **Michael J. London**, Web developer/database administrator; **Brian Hilligoss**, systems development librarian; **Robert Ladd**, education media specialist; and **Lisa S. Rae**, director, Development and Communications; Health Sciences Library, University of North Carolina–Chapel Hill

Purpose: To present key goals, project stages, and collaborative relationships in a health sciences library Website development process.

Setting: Academic health sciences library serving a large state university with multiple health professional schools, hospitals, and biomedical research facilities. In addition to the health sciences library, the university is also served by a main library system and a law library.

Brief description: In late 2002, the University of North Carolina–Chapel Hill Health Sciences Library (HSL) initiated development of a prototype for its new database-driven Website. Prototype development has been led by a core project team and three supporting task forces, and it has followed a methodical, well-documented design process. A core goal specified for the prototype site is integration of content

currently housed by the library's two existing Websites into a single presentation. Integration of the HSL online content with the selected content from the main campus library's Web presentations, especially online subscription resources such as electronic journals, is also a goal. Usability testing has been incorporated at early and later stages of design to ensure the site functions well for users. Collaboration and consultation with library staff, users (through usability testing), and the main library has been central to the success of the development process and achieving project goals.

Expected Results/Outcome: Development of a new Website to be released in spring/summer 2004.

TP24

VIVO: the powerful Web Portal of Cornell University's Life Sciences Initiative

Susanne K. Whitaker, AHIP, public services librarian, Flower-Sprecher Veterinary Library, Cornell University, Ithaca, NY, and **helen-ann brown, AHIP**, information services librarian, Weill Cornell Medical Library, Cornell University, New York, NY

Objective: This electronic poster describes the development of a "Virtual Life Sciences Library," called VIVO, an extensive Web-based portal of resources and services in support of Cornell's Life Sciences Initiative (LSI).

Design: As the center of the campus that brings information resources together, the library formed a committee of science librarians from Ithaca and the Weill Cornell Medical Library in New York City to determine ways of supporting this new Life Sciences Initiative. Described as the "largest interdisciplinary scientific effort in Cornell's history," this initiative seeks to enhance and support life sciences research and education by facilitating the collaboration of numerous scientists involved in many diverse areas. The LSI Library Committee began meeting biweekly in Ithaca with a conference call link to New York City in late 2002. A new bioinformatics librarian joined the group in February 2004. One of the first collaborative projects is the development of a unified Website that consolidates multidisciplinary resources into a single interface or portal. Primary users are expected to be current and prospective students (graduate and undergraduate), post docs, faculty, staff, and donors throughout the life sciences.

Results/Outcome/Evaluation Methods: VIVO (vivo.library.cornell.edu) intends to provide convenient links to LSI-related web sites from all over campus along with direct access to library resources and services. VIVO features a powerful database that utilizes structured relationships among data elements, or ontologies, for indexing and locating faculty profiles, courses, graduate fields, research centers, facilities, core service technologies, bioinformatics tools and databases, and other related elements. To redesign the prototype main page, a survey has been conducted to assess the site's usability with particular attention to its organization, data element presentation, content, and usefulness to target audiences. This involved several focus group sessions and follow-up interviews. VIVO will be formally unveiled to the Cornell community in early May 2004.

Conclusion: Our experience in developing VIVO can serve as a model for others in initiating similar multidisciplinary Web portals. It also describes how a representative committee of focused creative people with Web design and building skills plus strong public service orientation can communicate and function effectively over long distances.

TP25

Lighting the path to a powerful Web-based tutorial

Richard Nollan, AHIP, special collections librarian; **Brenda Faye Green**, instructional services librarian; and **Lin Wu**, reference librarian; Health Sciences Library, University of Tennessee Health Science Center–Memphis

Objective: In response to the demand for distance education and to bridge the gap between the library's services and the campus community, the library's instructional services, reference services, and campus faculty collaborated to create a Web-based library tutorial to help the campus seize the power of library resources.

Descriptions/Methods: The Health Sciences Library serves a comprehensive health science center with six professional schools with approximately 2,000 students. The tutorial helps the campus population increase their basic library skills, find library resources, use the Web, cite sources, and use online pathfinders. This poster will share the overall development and assessment of the tutorial. Pros and cons of using a course management system (Blackboard) and Web development tools will be shared. The collaborative effort of assessing, designing, and evaluating the tutorial provides a powerful incentive, and the authors expect this will lead to further development of additional modules for the tutorial. Focus groups will provide review and feedback. The value of collaborating with several departments to accomplish the goal is also demonstrated.

TP26

Library Web development: a decade in review

Mary E. Piorun, AHIP, associate director, Library Systems, and **Robert Vander Hart**, electronic resources librarian, Lamar Soutter Library, UMass Medical School, Worcester, MA

Objective: This poster examines how academic medical libraries have presented their Websites over the past decade. (1) How have advances in Web technologies influenced the "look and feel" of the Website? (2) What other developments contributed to the evolution of medical library Websites? (3) How has the librarian's role in Web development changed in the last ten years?

Methods: Reviewing the history of the Web and developments in new technology, we will note significant turning points in the design of our own library Website and that of other institutions of a similar size and mission. Using data and images from the Way Back Machine at www.archive.org, we will plot how changes in technology effect what information is presented, page layout, and usability. We will examine how changes in librarianship and the "information explosion" have helped the medical library web site progress.

Results: From examining our own Website history, we have determined that we were slow to implement new design technologies. Many of the technologies that were initially incorporated into the Web page design improved on graphical elements at first. Improvements on layout, searching, and form design soon followed. In 2000, a new underlying database

structure (using Cold Fusion) was added to the Website that allowed staff to better manage the large number of e-resources the library provided. Once a full-time position dedicated to Web management was created, our Website development was focused on layout and usability.

Conclusions: From looking at other Websites of similar size, we have determined that many libraries' Websites progressed first as an "online directory" providing basic information, then to a page that started to offer services such as request forms and links to an OPAC and/or MEDLINE, and finally to a dynamic site with electronic books, journals, and databases. Many institutions offer customized pages for individual users. Additional research is recommended.

TP27

If you build it will they use it? Giving patrons control of their library Website experience

Michelle Frisque, head, Information Systems; **Steve Hunt**, Web librarian; **Linda Walton**, associate director; and **James Shedlock, AHIP**, director; Galter Health Sciences Library; **Jon Handler**, associate professor, and **Michael Gillam**, assistant clinical professor, Emergency Medicine Division, Department of Medicine; Northwestern University, Chicago, IL

Objective: The library recently launched a new Website, which was created to help the busy health care professionals manage their information needs. The overall objective of this project is to measure the usage of the customizable tools developed for this site and to determine how and if different user groups take advantage of the customization features.

Methods: The customization tools that will be evaluated are the File Cabinet, a place where users can store and organize their favorite links; My E-Resources, a collection of the users' favorite e-resources; Quick Search, a metasearch tool; and Stay Current, which allows users to stay on top of the most recent journal literature. We will use quantitative and qualitative data collected over a six-month period to illustrate who is customizing, based on patron status and department affiliation and which tools they are customizing. Log files, database records, and user feedback in the form of surveys and one-on-one interviews will be analyzed to assess the popularity and effectiveness of the tools. Once the data are collected and analyzed, they will be used to improve the features as well as identify new tools that could be created for different user populations.

Results: Preliminary results show that approximately 15% of the users registered to use the library's Website have customized at least one section. My E-Resources is the most popular customized section followed by the Stay Current, metasearch and finally the File Cabinet. Students and faculty customize more then any other group. Residents are the least likely to customize. A user survey was recently completed on the effectiveness of the customization tools. The results of this survey as well as other data will be evaluated to judge the effectiveness of the customization tools for each of our user groups.

Conclusions: The library's Website was created to help our users manage their information needs. By evaluating the quantitative and qualitative data gathered, we are learning whether the tools we created assist our users and how to improve them to continue our goal of helping them tame the information beast.

TP28

Amplifying usability testing: harness the power of Camtasia Studio

Linda O'Dwyer, education librarian; **Stephanie C. Kerns**, head, Education and Outreach Services; **Mark Berendsen**, education librarian; **Kurt Munson**, head, User Services; **Cheryl Powell**, library assistant, and **Linda Walton**, associate director; Galter Health Sciences Library, Northwestern University, Chicago, IL

Objective: The library previously conducted Website usability testing using the "intensive note-taking" method. Communicating user difficulties effectively and accurately to the Web designers has been problematic. Our goal was to find and assess a more reliable usability testing method, so everyone involved in the Website redesign—designers, programmers, and testers—could more objectively share the users' experiences of the Website.

Methods: The library conducted usability testing of its new Website in fall 2003 using TechSmith's Camtasia Studio software. We used a similar set of tasks to those used in a previous usability study held in May 2002. This allowed us to obtain a correlative assessment of users' perceptions of the library Website and to see how the new testing method compares. Ten users were tested separately. Camtasia Studio was used to record each user's screen, clicks, and speech during the test. We watched and listened to each user's media file and extracted information for a usability report. We replayed problematic user interactions with the website for the programmers and staff involved in the design process. This meant that those not present at the user tests could interpret and understand more clearly why a particular section of the Website caused usability problems.

Results: The test facilitators submitted a usability test report to the Website designers. In places where confusion arose as to the nature of the problem encountered by the user, the designers were able to play back the relevant portions of the Camtasia files. This effectively placed the designers in the same room as the test subjects.

Conclusions: The use of Camtasia Studio may lengthen the usability reporting process, because the test facilitators and Website designers may have to replay portions of the file. However, the increased objectivity of the test and the improved accuracy of the results make Camtasia Studio an invaluable tool for usability testing.

TP29

Sharing the code: the Health SmartLibrary experience

Steven Hunt, Web programmer, Galter Health Sciences Library, Northwestern University, Chicago, IL

Objective: The Health SmartLibrary Website features a customizable interface, a current awareness service, a personal file cabinet, and a multi-resource searching tool. It was completed under a grant from the National Library of Medicine (IS Grant #1 G08 LM07051-01A1). Our goal was to share the

code for these features with interested libraries and to learn what we could about such cooperation.

Methods: Phase I: The Health SmartLibrary was presented and discussed at MLA and other meetings while still under development, and several informal contacts were made with colleagues interested in doing similar things at their own institutions. These colleagues were in similarly situated institutions and had some programming experience. They agreed to take the code we wrote, try to incorporate it into their own projects, and share their experiences as to the ease and effectiveness of implementation. Phase II: Next, we determined to make the code generally available to any library interested in downloading it. In order to make the code as portable as possible, each function was broken out into its own module designed to work as a plug-in to an existing Website. The modules were made available to any librarian who registered with us and agreed to give structured feedback.

Results: Several librarians with varying levels of programming experience from other medical libraries took our code and tinkered with it on their own sites. Their experiences differed in many ways but most found they had to do considerable work to accommodate their existing environments. Not all modules worked as a simple "plug-and-play." In most cases, additional consultations had to be undertaken beyond the original documentation provided.

Conclusions: We conclude that the work involved in making the various modules easily portable and adaptive to other environments was beyond our expectations, and in fact, would probably account for more time and work than the original programming itself. This is not to say that the participants' experiences were not instructive or valuable, or that other such code-sharing projects could not be successful, but the commitment of time and resources should not be underestimated.

TP30

Power management: seize the crisis and make it work for you

Deborah Bonelli, library director, and **Lisa Lin, AHIP**, reference librarian, Medical Library, St. Barnabas Hospital, Bronx, NY

Objective: The resignation of the electronic resources coordinator created a crisis for staff and patrons. Remaining staff lacked confidence about providing multimedia services. Patrons expressed anxiety about losing a valued library service. This crisis produced two dilemmas. How to assure library users of continued multimedia services and how to train staff, bolster morale, and market library multimedia expertise to the institution.

Methods: Motivating and training staff to create a tribute to the electronic resources coordinator in the form of a farewell movie resolved the crisis. The small hospital library staff learned to use iMovie, a powerful digital editing software, a compact Canon digital camera, and QuickTime Pro, to produce an eight-minute tribute to be presented at a hospital-wide farewell party attended by staff, patrons, and key hospital administrators.

Results: The project showcased the work of library staff who would soon be responsible for filling the role vacated by a key staff member. In the process, the remaining staff learned new skills, morale was bolstered, and their creativity and expertise were showcased to existing and potential users as well as to administrators. Existing clients were assured of continued multimedia services begun by the library earlier that year.

Conclusions: Seizing the crisis and creatively transforming it into a positive and productive experience for staff resulted in a greater sense of staff involvement in work and the continued reliance of outside departments on the library's multimedia services.

TP31

Seize the power of your patrons to promote your library

Amy G. Buhler, AHIP, reference librarian; **Dwight Bennett**, Webmaster; and **Ned Davis**, marketing and publications coordinator; Health Science Center Libraries, University of Florida–Gainesville

Objective: For an academic health science center (HSC) to succeed and flourish, getting administrative leaders to feel personally connected with the library is essential to ensure that support of the library is always in their plans and budgets. This poster will detail our library's "RxEAD: Prescription for Knowledge" poster campaign, which promotes our continuing positive relationship with the faculty, staff, and students.

Methods: HSC deans were asked to pose with a book that was important to them personally or professionally. These pictures of the leadership promoting library resources were produced as twenty-by-thirty-inch posters and placed in library display cases. Bookmarks with miniatures of the posters and library services information continue to be distributed to faculty, staff, and students. The RxEAD posters are not tied to a specific month or event but function more as a general library promotion and will be employed at several events during the coming year. We anticipate our gallery of Powerful People Who Love The Library will continue to grow. One administrator believes this will introduce students to university leadership *and* promote the libraries.

Results: We achieved full participation from the HSC colleges; nearly every dean and program head personally participated. Several participants requested personal copies. Bookmarks of the posters were also successful—hundreds of each were distributed at various library and college functions. Another large-scale distribution is planned for the fall term. All the participants said they were honored to appear on a poster, and thanked us for the opportunity. Once posters were on display, other faculty and administration members asked about participating in next year's campaign.

Conclusions: Although hard to quantify, we feel this campaign was very successful. We noted many positive comments and reaction to the posters and are certain of the value of making and reinforcing connections between the library and deans, administrators, faculty, staff, and students. One final measure of success: the RxEAD poster campaign won first place in this year's National Medical Librarians Month Creative Promotions Awards.

TP32

Going for the green$$$$

Martha M. Studaker, AHIP, library director; **Phyllis L. Reams**, librarian I; and **Sharon J. Williams**, librarian I; Hamady Health Sciences Library, Hurley Medical Center, Flint, MI

Purpose: This poster demonstrates how a hospital library generates thousands of dollars in funds, enabling them to purchase without the administrative "red tape."

Setting: It is a city hospital, but receives no funding from the city. Market share is split among three hospitals with the city hospital caring for 80% of uncompensated care. Every year, since 1995, the budget has been cut or remained flat.

Description: The common refrain "they should realize the worth of the library and provide funds accordingly," does not take into account that while the library might truly be appreciated, money only goes so far. Charged with planning for the future financial viability of the library, an Endowment Fund was established. This was the catalyst for fundraising endeavors. The Endowment Funds currently total $276,000. An Annual Ball made the library a beneficiary of $107,000. Supplementing the solicited donations were small library fundraisers: bake sales, old book sales, raffles, and even a library cookbook. Additionally, since 1994, the library began fundraising in earnest, raising over $85,000 in 8 years. It began with a Hurleyopoly game. Then there were "home shows gone corporate." The library currently sponsors 10 fundraisers each year averaging $12,000 to $16,000 per year. These sales involve little time and effort from the library staff. The keys to success are institutional cooperation, location, payroll deduction, percentage negotiation, and products. This money translates into power: the power to purchase.

TP33

The Arizona Health Sciences Library's "Ask a Health Librarian" Project: marketing our new virtual reference chat service

Bruce Chandler, support systems analyst; **Hannah Fisher, AHIP**, librarian; **Fred Heidenreich**, librarian; **David K. Howse**, assistant librarian; **Nga Nguyen**, senior library specialist; **Joan Schlimgen**, librarian; **Stefan Walz**, support systems analyst; and **Cathy Wolfson**, librarian; Information Services, Arizona Health Sciences Library, University of Arizona–Tucson

Objective: This poster will report on how marketing efforts affected the usage trends of the Arizona health library's virtual reference chat service.

Methods: The Arizona Health Sciences Library (AHSL) is a large academic health sciences library serving diverse populations, including faculty, staff, and students of the colleges of medicine, nursing, pharmacy, and public health, in addition to the practicing health professionals and residents of Arizona. The Information Services staff worked jointly with the head of access services to design and implement a marketing plan for its new virtual reference service, called "Ask a Health Librarian," which included a new "chat" feature. The AHSL launched the "Ask a Health Librarian" service, which uses Docutek VRLPlus software, to enable patrons to email and chat interactively with librarians, in September of 2003. Aggressive marketing of the new service was purposefully avoided in the beginning for two reasons: to enable staff to become comfortable with the new technology, and because it was difficult to determine how resource-intensive the service would be to support. Due to initial low use of the chat feature, it became clear that a marketing strategy was needed. Information Services staff collaborated with the head of access services to create posters, bookmarks, colorful Web banners, and icons; to publish news items; and to discuss the service and its availability in various library orientations and instructional classes. It is expected that usage statistics will rise as marketing efforts intensify. Usage statistics will be evaluated against a timeline depicting various marketing strategies. Docutek VRLPlus's built-in patron satisfaction survey will provide valuable data on how the service is being received as well.

TP34

Publicity juggernaut at the University of Maryland Health Sciences and Human Services Library

Diane Fuller, information specialist; **Alexa Mayo, AHIP**, assistant director, Information and Instructional Services; **MJ Tooey, AHIP**, executive director; and **Bradley Gerhart**, information technology support specialist; Health Sciences and Human Services Library, University of Maryland–Baltimore

Objective: This poster reports on traditional and innovative methods used to promote and market library resources, services, and programming to the University of Maryland–Baltimore community. The Health Sciences and Human Services Library (HS/HSL) of the University of Maryland–Baltimore is a large, academic library serving the schools of pharmacy, dentistry, medicine, nursing, and social work and the University of Maryland Medical Center in an urban setting. The HS/HSL also provides selective outreach to area hospitals and library members. Library Administration and Public Services Divisions are responsible for content.

Methods: Promotion of the library's services and resources and creating an awareness of the value that the library brings to the campus is essential to its long-term health. This poster will report on a variety of promotional methods used by the HS/HSL. Successes and a variety of challenges to these promotional activities will also be demonstrated. The HS/HSL uses a systematic and organized approach to marketing and publicity. This poster will describe these approaches, as well as impediments to our success.

TP35

Unearthing the power of data mining to evaluate and manage library collections

Esther E. Carrigan, AHIP, deputy director; **Nancy Burford**, database and digital services librarian; and **Robin R. Sewell**, research liaison and reference librarian; Medical Sciences Library, Texas A&M University–College Station

Objective: Collection budgets are greatly stressed in the world of complementary print and electronic resources. Client preferences for full-text journals continue. Purchase of redundant print and online material must be justified. New bibliographic techniques are needed to maximize intellectual

access and use of collection resources. This poster demonstrates the data mining achieved and its use as the basis for collection decisions.

Methods: Data was brought together from a variety of sources and analyzed. LIBQUAL customer surveys provided a baseline for satisfaction and expectations for the collection. Print usage statistics for the past 5 years were combined with subscription costs, online usage statistics and broad subject focus information. All titles with fewer than 10 uses per year or a cost per use greater than $30 were evaluated for possible cancellation. Labels were placed on current print issues to alert users to proposed cancellations. Bibliographic and usage data were extracted from the integrated library system for a complete monograph collection evaluation. A data file extracted from the integrated library system was used to populate a list of electronic resources and support a subject presentation of full-text resources on the library Website.

Results: Decisions were made to convert nearly a third of current print journal subscriptions to online only. Print only subscriptions with little use were cancelled. Review of the monograph collection resulted in the withdrawal of significant numbers of monographs and enhanced records for many of the items retained.

Conclusions: We were successful in our attempt to make collection decisions based on data gathering and analysis. Feedback sought from clients through comment cards, email, focus groups, and surveys strongly affirmed collection decisions made.

TP36

A capital improvement: the remodeling of an academic medical library's reference collection

Nancy A. Bianchi, health sciences librarian, and **Carroll Guitar**, health sciences librarian, Dana Medical Library, University of Vermont–Burlington

Objective: This poster describes a contemporary approach to revitalizing a traditional paper reference collection in an academic medical library.

Methods: The reference collection—traditional print resources, standing like an island in a sea of glitzy electronic databases—we all have one in our libraries, yet its resources often are undervalued for their scholarly content and vastly underutilized by our patrons. When the library was forced to move to temporary quarters, it became all too apparent that the time was ripe for some capital improvements to the reference collection. What followed was a systematic review of each title on the shelves of reference. Our ultimate goal is to eventually move a contemporary reference collection, which is responsive to both academic and clinical information needs, into our new state-of-the-art facility.

Results: Our sixteen-month long collection review project witnessed a much needed reexamination of the collection development philosophy, quality improvements to the supporting infrastructure, and a unique approach to blending a document's current Web site with its traditional paper resource, where available.

Conclusions: These capital improvements to our traditional reference collection have paved the way for remodeling and building a reference collection for the 21st century in an academic medical library.

TP37

Withdrawn

TP38

Core journal evaluation study: method and data analysis

Jane L. Blumenthal, AHIP, assistant dean, Knowledge Management, and director, and **Vani K. Murthy**, assistant director, Collections and Systems, Dahlgren Memorial Library, Georgetown University, Washington, DC

Objective: This poster will present results of a journal assessment study conducted at an academic medical library. The purpose of this study was to identify a set of core journals by using a method that encouraged faculty participation and emphasized user needs. This was to ensure that library funds are initially appropriated for journals that are of greatest importance to users.

Setting/Population: This study was conducted in an academic medical library that serves approximately 5,000 students, faculty members, staff, and physicians. Around 750 faculty members were invited to participate in the evaluation of journals.

Methodology: In 2000/01, the medical library began the process of developing a core journal study. Factors to be used in the study were carefully selected and were used in a formula that was applied to the entire journal collection. Impact factor, half life, Brandon/Hill rating, faculty rating, faculty publication data, cost per use, interlibrary loan data, and indexing information were some of the factors used in the formula to determine the core collection. The SAS program was used to determine the relationship between some of these factors. Relationships between the different factors used in the formula will be analyzed and displayed graphically on this poster.

Results: Journals were sorted in descending order based on the formula and a core journal line was drawn. Titles above the line were identified as core journals and were associated with a high impact factor and faculty rating. While many journals below the core line had low impact factors, faculty rated some of them as essential. A closer examination showed that these were mostly new titles or nursing journals. Data analysis also revealed that there was no correlation between faculty rating and the Brandon/Hill rating or the impact factors. However, there was a correlation between journal usage and faculty rating.

Conclusions: This study was successful in defining the core collection, and was helpful in identifying journals to discontinue or retain only in electronic format. Data analysis suggests that future journals' selection cannot depend primarily on Brandon/Hill rating or the impact factor but must draw heavily on faculty recommendations.

TP39

Power through communication: using the Web in a journal evaluation project

Robin Klein, digital resources librarian, Collection Development Department; **Patricia G. Hinegardner, AHIP**,

Web manager, Information and Instructional Services; and **Brad Gerhart**, information technology support specialist, Computing and Technology Services; Health Sciences and Human Services Library, University of Maryland–Baltimore

Objective: This poster will highlight the development of a Journal Evaluation Project Website, which the library used to communicate journal subscription concerns to the campus community. It will also provide information on the Web-based survey used to enlist campus participation in the review of possible journals to be cancelled.

Methods: The phenomenal rise in journal subscription costs and state budget problems have had a negative impact on our library budget, making it necessary to re-evaluate the journal collection. The Website was developed to make the campus community aware of the issue and to encourage participation in the solution. It informed them of current trends in journal subscription costs and introduced publishing alternatives. A Web-based survey was used to enlist faculty, staff, and student participation in the journal deselection process. This poster will highlight the process of developing the survey and the site. It will also summarize the outcome of the survey.

Results: The site was launched April 7, 2003. The survey was open for voting through May 16, 2003. The Website later announced the survey results. The number of faculty and students who voted totaled 207. Of 573 titles, 453 received votes to retain. 371 journals were cancelled based on the survey and subsequent review by librarians.

Conclusions: The Web-based presentation for the Journal Evaluation Project was a successful mechanism for informing users and obtaining reliable feedback to proposed journal cuts. This Web-based format will be used again this year as budget constraints and unsustainable journal subscription costs collide at the library.

TP40

Linking technology's power to deliver needed articlesto undergraduate nursing students

Marcia Henry, health sciences librarian, University Library, California State University–Northridge

Objective: Investigate the effectiveness of the California State University–Northridge Library's new SFX linking technology to meet the document delivery needs of the undergraduate nursing program

Methods: This retrospective cohort study will analyze article requests made by nursing students using the CINAHL document delivery program funded by a California Wellness Foundation grant from 1999 to the present in light of the university library's newest linking technology. To date, the CINAHL document delivery program has delivered over 1,200 articles from over 200 nursing and medical journals. The library recently acquired ExLibris' SFX article linker service. This study has important contributions to both user education and collection development. It will identify which journal titles requested over the last 4 years are now readily available in the library's growing electronic journal collection. It is apparent that the need for CINAHL document delivery service has dramatically dropped since its heaviest use in 1999 and 2000. Initially, the decrease in requests was linked to OCLC's ability to connect to the library catalog directly from the CINAHL record in FirstSearch. This study will analyze the database of requested articles against the new SFX screens to identify how well the new SFX technology can contribute to student success in finding the needed articles in the library's growing full text databases. Samples of effective SFX screens as well as emerging problematic issues will be identified.

TP41

Tell the story in a powerful way: medical library collection management

Carole Francq Gall, development officer and manager, Print Journals, Ruth Lilly Medical Library, Indiana University School of Medicine–Indianapolis, and **Jane F. Corbett**, trainer, Training, Eli Lilly, Indianapolis, IN

Objective: The medicine library has effectively managed 2,000 active subscriptions with little faculty complaint. Over $1 million was saved through a decade of cancellation decisions, which saved the subscription price and inflationary increases. Also, the library refreshed its collection with 400 new subscriptions. How can we tell this success story in a powerful way to faculty and potential donors?

Methods: In MS Excel, a formula was devised to calculate the cumulative savings from cancellations over a decade, including inflation. The formula combines current year savings, plus the prior year's cumulative savings, plus inflation on the prior year's cumulative savings. The same formula figured the new subscriptions cumulative costs. The average inflation was taken from the EBSCO Serials Prices in the chart for the Academic Medical Library Cost History. The overall net savings should show the importance of using metrics for publicity, but the figures would still be hard for laypeople to interpret. The spreadsheet Chart Wizard should be an easy, effective method to change the metrics into intuitive charts for promotion and fundraising. Applying adult learning principles to the resulting charts and related content should modify the outcomes in MS PowerPoint and Web page formats intended for laypersons.

Results: We found that the standard three-dimensional pie chart was the most compatible with our data; also the standard chart options in Excel were all that was necessary for an impressive presentation of the data. The MS Excel worksheet had multiple levels of row and column labels, which we renamed carefully, because the labels transferred to the chart legends. Copy and paste were used to import the finished chart into a PowerPoint and a Web page, then the library staff and others were asked to preview the results and give us feedback. We are confident in using the charts with prospective donors

Conclusions: MS Excel Chart Wizard is easy to use. The resulting charts are compatible with and easily imported into PowerPoint presentations and Web pages. The charts are colorful, easy to interpret, and contribute to a professional image of the library they represent.

TP42

"But we made the *easy* cuts *last* year!" Staffing the library

Jane Fama, associate director, Access Services, Lamar Soutter Library, UMass Medical School, Worcester, MA

Objective: After dealing with three major budget cuts in FY03, the Lamar Soutter Library faced additional reductions for FY04. The Management Team realized that drastic journal and staffing cuts were on the horizon. Concerns for the collection and for continued customer service called for creative solutions. This poster chronicles the process we used to institute the changes that were necessary to keep our public service desks staffed.

Methods: We anticipated the loss of 3.5 FTE circulation staff and 1.0 reference staff, all part time employees whose major responsibilities were stacks maintenance and staffing the library on weekends and evenings. It was clear that we did not have enough bodies to staff the library at our current level of 106 hours per week, but how many hours could we cut? We used a three pronged approach to arrive at a solution.

1. Looked at the top twenty-five medical and health sciences libraries for benchmarking.
2. Gathered daily usage statistics every two hours for several months to determine the times that the library was most heavily used.
3. Developed several possible scenarios using current circulation staff as well as staff from other areas of the library.

Results: Benchmarking revealed that, at 106.5 hours, we were open well above the mean of 94 hours per week. Usage statistics identified the times and days when reduction of hours would be least disruptive to our clientele's needs. We created several alternative schedules with hours ranging from the mean to 12 hours under the mean. Using the staffing levels that we anticipated after the cuts, we identified problem times—times when we had no desk coverage—and proposed staffing solutions for each scenario using resources from technical services, where processing time had been reduced due to budget cuts and process reengineering.

Conclusions: Our optimal opening time was 86 hours per week. This 19% reduction in hours went into effect on July 1, 2003. Although the students were not happy with losing library hours, the justification was clear and the process by which we developed a plan was sound. The plan has operated successfully for over six months and has produced bonus benefits we had not anticipated.

TP43

"But we made the *easy* cuts last year!" Maintaining a quality journal collection in tough budget times

Barbara Combes Ingrassia, AHIP, associate director, Technical Services, and **Elaine Russo Martin, AHIP**, director, Library Services, The Lamar Soutter Library, University of Massachusetts Medical School–Worcester

Objective: After dealing with three major budget cuts in FY03, The Lamar Soutter Library faced additional reductions for FY04. After brainstorming, the management team realized that drastic journal and staffing cuts were on the horizon. Concerns for the collection and for continued customer service called for creative solutions. The poster will examine the measures taken to preserve a quality journals collection.

Methods: After compiling and sorting print and online usage statistics gathered over an eighteen-month period, low-use titles were identified for possible cancellation in order to meet the revised budget guidelines. A spreadsheet was prepared including information concerning annual subscription/ licensing costs, publisher, publication frequency, appearance on core titles lists, availability via databases, inclusion in aggregation packages, subscription requirements for electronic packages, availability in nearby affiliate institutions, and usage and cost-per-use statistics. The list was refined over several months, and distributed to the faculty for input. The director of library services attended various committee meetings to answer questions and gather feedback. A final list of titles, with total projected cost savings, was compiled. There were elements of both "art" and "science" in this process.

Results: The results of this process were unexpected. The faculty had been involved in the process, and understood the ramifications of massive journal cuts. As a group, the faculty Council protested to the School Administration about the planned cuts—and the administration gave the needed funds to the library to pay for the journals slated to be cut.

Conclusions: Although a "happy ending" is not always possible, a carefully planned review process, utilizing as much hard data as possible, and keeping the users informed at each stage, can benefit the library as it seeks to provide quality resources in support of the school's mission.

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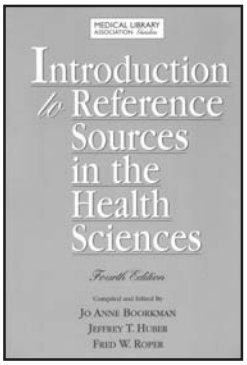

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