MLA '12 Abstracts

A Supplement to the *Official Program*

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All unsolicited abstracts for the annual meeting undergo a process of blind peer review. Abstracts of papers intended for section programs are reviewed by members of a panel of reviewers from the sections sponsoring the programs. The final decision on program speakers rests with the section program planners. Abstracts for the poster sessions are reviewed by members of the Medical Library Association National Program Committee (NPC), and designated NPC members make the final selection of posters to be presented at the annual meeting.

Contents

Section Programs 1

Sunday, May, 20, 4:30 p.m.–6:00 p.m.

2012 National Program Committee (General Topic)

From the Bench to the Field: Translational Research (general topic session)

Cosponsored by Cancer Librarians Section, History of the Health Sciences Section, Institutional Animal Care and Use SIG, Molecular Biology and Genomics SIG, Translational Sciences Collaboration SIG

WSCC, Room 606/607, Level Six

4:35 p.m.
Utility Players: A Library's Research Services Easily Integrate into Translational Science Programs and Committees
Sally A. Gore, Head, Research and Scholarly Communication Services; **Lisa A. Palmer, AHIP,** Institutional Repository Librarian; Lamar Soutter Library, Medical School, University of Massachusetts–Worcester
Objectives: One of the goals of the National Institutes of Health's (NIH's) Clinical and Translational Science Awards (CTSAs) is the rapid dissemination of research results. An institutional repository can be a tool to support this by providing access to the full text of published research, collecting and archiving gray literature, publicizing individual and department collections, and measuring research impact via usage statistics.
Methods: After attending a continuing education course on CTSAs at MLA '11, the head of research and scholarly communication services and the institutional repository librarian approached the director of the medical school's CTSA operations with a list of proposed services the library could offer to support the work of the program. These included creation of a specific collection in eScholarship@UMMS, our institutional repository (IR), to gather and preserve published and unpublished work related to the award; use of the IR to coordinate and capture content from CTSA events; integration of current and new library classes into a curriculum for researchers (traditional and online); and participation on the team measuring impact of funded research. Each suggestion was reviewed, the list prioritized, and the ideas implemented accordingly. By integrating services early in the award cycle, the library becomes a valued partner in CTSA operations.
Results: The library created new collections within eScholarship@UMMS devoted to the university's Center for Clinical and Translational Science. These include presentations, posters, and proceedings from two annual events, the "Clinical and Translational Science Research Retreat" and the "Community Health and Research Symposium." These collections then became embedded in the center's website, serving to both promote and evaluate the output of the CTSA.
Conclusions: The IR, eScholarship@UMMS, proves a valuable resource to the Center for Clinical and Translational Science, offering many new areas for collaboration between the library and the research community.

4:51 p.m.
Supporting a University Clinical and Translational Science Award: A Team-Based Approach
Rachel C. Lerner, TraCS Knowledge Management Librarian; **Barrie Hayes,** Bioinformatics and Translational Science Librarian; Health Sciences Library, University of North Carolina–Chapel Hill
Objectives: To further the collaborative relationship of the health sciences library and the university's Clinical and Translational Science Award (CTSA) unit, these partners created new librarian positions to specifically assist in advancing translational and clinical research.
Methods: After two years of successful team-building, the health sciences library and the university's CTSA unit have moved to a model of pitcher and designated hitter (DH) for library service roles. The pitcher is a new embedded librarian who specializes in knowledge management and grant seeking for the TraCS Institute. The designated hitter is the more typical powerhouse liaison librarian who provides individualized research support. In this model, both librarians become very specialized in their roles, allowing them to focus on their core functions. This did not simply add another member to the team; it expanded services in both roles. These include bibliometric analysis of research output, concierge grant-seeking services, data management planning, scholarly communication assistance, research trainee instruction, and faculty expertise profile management.

5:07 p.m.
Using Genetic Literacy to Facilitate the Dialogue of Pharmacogenetic Concepts to Patients
Adeola R. Davis, Information Scientist and Health Literacy Coordinator, Knowledge Management; **Nunzia B. Giuse, AHIP, FMLA,** Assistant Vice Chancellor, Knowledge Management, Director, Eskind Biomedical Library, and Professor, Department of Biomedical Informatics and Department of Medicine, Eskind Biomedical Library; **Mary Beth Bauer,** Pharmacogenetics Information Scientist, Knowledge Management, Eskind Biomedical Library; **Taneya Koonce,** Associate Director, Research, Knowledge Management, Eskind Biomedical Library; **Jim Jirjis,** Assistant Professor, Department of Biomedical Informatics and Medicine, Chief Medical Information Officer, and Director, Adult Primary Care Center; Vanderbilt University, Nashville, TN
Objectives: To facilitate effective patient engagement with genome-based, personalized medicine by integrating consumer-level information about complex genetic concepts into an existing online patient information portal, thereby contributing to the advancement of an institutional effort emanating from a Clinical and Translational Science Award (CTSA).
Methods: The Knowledge Management team at Eskind Biomedical Library (KM/EBL) at Vanderbilt University plays a key role in connecting medical center patients to vetted, authoritative health information about chronic diseases, preventive medicine, and diagnostics via the institution's electronic patient portal. Leveraging this established history, the KM/EBL team proactively partners with a key group to support an institutional translational medicine effort. The initiative places genetic information in a patient's electronic medical record to assist physicians with choosing drug therapies and provides the personalized results directly to patients. However, to effectively comprehend and

apply the health information generated by pharmacogenetic tests and displayed in the patient portal, adequate health literacy is essential. Using information science, pharmacogenetic and health literacy expertise, the KM/EBL team contributes to modification of explanatory content about genetic concepts for consumers, empowering patient partnership and facilitating greater effectiveness of this CTSA-funded effort.

Results and Conclusions: Advances in translational research and medicine, including treatments based on an individual's genetic make-up, are rapidly paving the way to the next standard of health care. Information professionals must equip themselves with knowledge about how best to convey intricate genetic concepts to consumers. The first patient-friendly text created via KM/EBL's collaborative effort with the CTSA team, communicates the influence of a patient's genetic makeup on the metabolism of an antiplatelet drug, clopidogrel (Plavix). Since becoming accessible in July 2011, the consumer-level information has been accessed close to 500 times by 250 patients. Although not formally evaluated, a focus group with users of the patient portal indicated that the information provided was quite clear and useful. The KM/EBL team's involvement in the development of consumer-friendly pharmacogenetic information is viewed as critical by the CTSA team, as supporting the information needs of patients and families, and as central to promoting all forms of personalized medicine health care communication.

5:23 p.m.

Meeting the Unique Information Needs of Clinical and Translational Researchers: Assessment, Preparation, and Intervention

Michele Tennant, AHIP, Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; **Jennifer A. Lyon, AHIP,** Clinical Research Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Rolando Garcia-Milian,** Basic Biomedical Sciences Librarian/Liaison, Biomedical and Health Information Services, Health Science Center Libraries; **Hannah F. Norton, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Cecilia E. Botero,** Associate Dean, George A. Smathers Libraries, and Director, Health Science Center Libraries; University of Florida–Gainesville

Objectives: To provide effective services to clinical and translational (CT) researchers, it is vital that librarians understand this community's unique information needs. This presentation describes a multifaceted user needs assessment focused on University of Florida (UF) CT researchers and their information needs related to clinical research, bioinformatics, and data management. Training for librarians in subjects crucial to this population is also discussed.

Methods: UF Clinical and Translational Science Institute (CTSI) comprises over 600 faculty researchers from disciplines as diverse as medicine and journalism. Librarians at UF's Health Science Center Library explored the information needs of this research community utilizing a multimodal approach. Online assessments, focused discussions, and interviews related to clinical research, bioinformatics, and data management were administered in 2012. In 2011, librarians at Clinical and Translational Science Awards (CTSA)-awarded institutions were surveyed regarding services they provide to such researchers, and in 2012 this survey was expanded to include librarians at institutions with or without CTSA funding.

Results: Study results suggest that few researchers are aware of even the basic services that librarians can provide, let alone those specifically related to CT research. Librarian contributions to the CTSA renewal process, assessment of research impact, and assistance in the systematic review process were cited by researchers as valuable services for the library to offer. Roles suggested by librarians included support for research collaborations, community engagement efforts, bioinformatics resource instruction, and data management planning. Responses from librarians suggest that most are in the exploratory phase related to services identified by researchers.

Conclusions: Study results suggest numerous new roles for librarians in relation to CT research. Training in these areas will be essential in order to provide these services, and the UF Health Science Center Library has recently afforded its librarians a number of training opportunities in these areas. Initial interventions to support researchers include librarian membership on the CTSI's Regulatory Knowledge and Research Support Committee and librarian integration into the CTSI curriculum for new clinical researchers. Further work includes the planning and development of a slate of bioinformatics-related courses and integration into data management planning activities.

5:39 p.m.

Playing on a Clinical and Translational Sciences Awards (CTSA) Team: Whitey Herzog's Rules

Cathy C. Sarli, AHIP, Scholarly Communications Specialist; **Kristi Holmes,** Bioinformaticist; Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO

Objectives: Clinical and Translational Sciences Awards (CTSA) represent prime opportunities for libraries to support translational research efforts on their campus and often lead to being appointed on an official team within an institution's CTSA. Being part of a CTSA team requires an understanding of team science and transdisciplinary team-based collaboration, while managing time and expectations as well as capitalizing on serendipity.

Methods: Library staff serve an integral role as members of a CTSA Tracking and Evaluation (T&E) Team. The T&E Team represents an interdisciplinary team composed of statisticians, social scientists, clinical investigators, public health investigators, a librarian, a bioinformaticist, and a project manager—all of whom contribute unique perspectives. While being part of a diverse team is an ideal way to leverage expertise and resource sharing, learning how to play by the rules of an interdisciplinary team requires a new skill set, especially for librarians. Eduardo Salas's "Six C's of Teamwork: Cooperation, Coordination, Communication, Cognition, Coaching, and Conflict" serve as an ideal framework for collaborative opportunities. This presentation will examine Salas's Six C's of Teamwork through Whitey Herzog's rules for baseball (be on time, bust your butt, play smart, and have some laughs while you're at it!).

Results: A strong collaborative relationship between the library staff and the T&E Team was formed over the course of the funding period. Given the interdisciplinarity of the T&E Team members, there were new rules of the game that had to be learned as part of our roles in performing evaluation activities for our CTSA.

Conclusions: Being part of an effective and successful interdisciplinary team working toward a common goal is a rewarding experience for library staff. A successful team requires a shared understanding of the tasks to be performed and by whom, adaptability, trust, new skill sets, and a desire to be part of a team. Central to teamwork is leadership that outlines the direction of team activities and provides feedback on performance and expectations.

Cancer Librarians Section

Clinical Librarians Get into the Game: Collaborating with Clinicians to Improve Patient Care

Cosponsored by Clinical Librarians and Evidence-Based Health Care SIG, Federal Libraries Section, Dental Section

WSCC, Room 611, Level Six

4:35 p.m.
Opening Day: Reflections by a Clinical Medical Librarian on Clinical Rounds during the First Day Implementation of a New Electronic Health Record System
Julia Esparza, AHIP, Clinical Medical Librarian and Assistant Professor, Medical Library; **Gunjan Kahlon,** Assistant Professor and Section Chief, General Internal Medicine; Louisiana State University Health Sciences Center–Shreveport
Objectives: Across the country, hospitals are implementing new electronic health records to meet federally mandated changes for Medicare reimbursement. With the implementation of a new electronic health record, there can be excitement and anxiety for many organizations. A clinical medical librarian (CML) will discuss the implementation of a new electronic health record (EHR) and the effect on clinical rounds.
Methods: The CML typically rounds with a faculty physician, residents, and medical students each day at the point of care. Up until implementation of the new HER, the CML was the only one carrying a netbook to access the current medical record system. What effect does implementation of a new EHR have on clinical rounds? What effect does an iPad play when each member can now access the EHR and library resources at the point of care? The CML will describe the experiences of adapting to a new EHR. Focus for the presentation will be on the CML's experiences and the benefits of the new system over the old. Where appropriate, reflections from the faculty physician, resident, and medical student will be included in the presentation.
Results: Observations of the first day with the new EHR showed a vast level of confusion. Education beyond how to use the EHR was significantly reduced. While there were "superusers" on floors to assist clinicians, the vast amount of clinicians struggled to complete simple tasks. In addition, further frustration was experienced when the system went down on and off on the third and fourth days. The system had a deep learning curve for older clinicians who were not confident in their typing, but the system was useful in that many check boxes and drop-down menus eased the use of the system.
Conclusions: While the first days were chaotic within the first two weeks of implementation, most individual clinicians using the system everyday were beginning to feel confident. Now three months out, both inpatient and outpatient visit levels are almost back up to pre-implementation levels.

4:55 p.m.
Stepping out of the Library: The Use of iPads for Patient Care
Emily Vardell, Director, Reference and Education; **Yanira Garcia-Barcena,** Senior Reference Librarian; Louis Calder Memorial Library, Miller School of Medicine, University of Miami, Miami, FL
Objectives: The librarians seek to measure how physicians, nurses, and other health care professionals use iPads to support their patient care, including identifying how they are searching at the bedside and which applications and sites they find most useful in supporting evidence-based clinical decision making.
Methods: The librarians staffed office hours in the hospital cafeteria, showcasing library resources and drawing special attention to the tools available on handheld devices. Those who participated in demonstrations completed a short questionnaire identifying which resources they use for patient care and how, if given the opportunity, they would use an iPad to improve patient care. From these questionnaires, the librarians identified nurses, physicians, and other health care professionals to loan one iPad each for a three-month period. These health care professionals were required to fill out monthly surveys to state how they used the iPad to improve clinical care and which resources were most useful to them. After the three-month period, the iPads were rotated to a different group of health care professionals, and this process continued on a three-month cycle.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

5:15 p.m.
Switch Hitter: Balancing Embedded and Traditional Liaison Roles
Jonathan B. Koffel, Clinical Information Librarian, Bio-Medical Library, University of Minnesota–Minneapolis
Objectives: While some librarians provide full-time embedded service to specific departments, others must balance embedded roles with general liaison activities. This paper will describe the successes, failures, and recommendations of a clinical librarian taking on an embedded role part-time.
Methods: The author serves as a clinical information librarian at the University of Minnesota (UMN) Bio-Medical Library and supports the needs of residents and clinical departments across the UMN Medical School. He was approached by the neurology residency director, who was interested in improving the evidence-based medicine (EBM) and information use skills of her residents. They created a plan where the author would joins rounds, participate in journal club, create a blog around EBM questions and issues, and codesign and teach an EBM curriculum. His impact will be assessed via qualitative surveys and feedback from residents and faculty. At the same time as working with neurology, the author sought to balance this embedded role with competing roles in other departments and duties within the libraries.
Results: Over the course of 6 months, the author spent about 1 day each week with neurology, attending rounds and conferences and meeting with residents. Despite this moderate time commitment, the author developed a strong relationship with the department and residents and became well integrated into it. At the same time, he was able to pursue opportunities with other clinical departments and begin developing a new outreach program to researchers.

Conclusions: Liaisons can take on traditionally embedded roles, like rounding or journal clubs, while still serving other departments and user groups.

5:35 p.m.
Bases Loaded, Patient at Bat: Genetics Clinicians, Clinical Librarian, and Consumer Librarian Collaborate to Enhance Patient Care
Susan Robishaw, AHIP, Director, Health Sciences Libraries; **Patricia Ulmer, AHIP,** Community Health Librarian, Community Health Resources Library; Geisinger Health System, Danville, PA
Objectives: To form a collaboration among clinicians (physician and counselors) and librarians (clinical and consumer) to enhance patient care for patients seen in the genetics clinic by increasing clinicians' productivity and efficiency and by offering disease-specific, literacy-level-appropriate consumer health information to patients, parents, or caregivers.
Methods: Clinical librarian attends pre-clinic meeting to review patients and diagnoses and determines information needs. Librarian researches the topic, sends results to clinician. Library staff obtains requested articles, exports citations to RefWorks, inserts link to article in citation, or attaches portable document format file (PDF) for clinician's review. Clinician requests consumer health information consult via patient's electronic medical record (EMR). Consumer librarian retrieves requests, searches the consumer health literature, reviews it for literacy level, delivers it to patient or parents, tracks information in RefWorks, and adds RefWorks link to EMR. Measure impact: Patient surveys, library statistics, calendar review. Population: rural, disperse, located in twenty-three counties
Results: Program statistics:
• 538 clinical searches
• 1,407 articles obtained
• 111 information consult requests
• 39 patient feedback surveys returned
Impact on clinicians:
• Visit preparation time reduced from 2–3 weeks to 2–3 days
• Number of pre-authorization requests for tests reduced
• More complete information at the patient's initial appointment
Impact on patients:
• Information has positive impact on understanding of condition or treatment
• Wait time for new appointments reduced
• Unnecessary testing reduced
• Earlier treatment/intervention
• Fewer return visits
• Reduces patient time, effort, costs
Conclusions: This successful, collaborative project among genetics' clinicians and librarians has had a positive impact on patient care for both clinicians and patients. The clinicians need less time to prepare for a patient encounter. They maximize the time they spend with the patients. They have more information about the patient's potential diagnoses at the time of the initial visit. Having more information allows the clinician to spend more time reviewing the diagnosis with the patient and addressing his or her concerns and to selectively order tests. Patients receive trusted, accurate, and up-to-date health information they use to better understand their condition or treatment.

Dental Section

Connecting with the Away Team: Leveraging Mobile Technology

2012 STAT!Ref Lecture

Cosponsored by Nursing and Allied Health Resources Section, Educational Media and Technologies Section, Libraries in Curriculum SIG

WSCC, Room 608/609, Level Six

4:35 p.m.
Keeping Score: Use of iPads by Clinical Faculty
Emily Brennan, Medical Librarian; **Eileen Eandi,** Associate Director, Educational and Research Services Division; Norris Medical Library, University of Southern California–Los Angeles
Objectives: A group of clinical faculty responsible for teaching medical residents received iPads for patient care and educational use. The library instructed faculty on installing and using core mobile resources, and distributed pre- and post-iPad surveys to compare changes in attitudes and workflow. Mobile devices provide an opportunity for librarians to share expertise and collaborate with clinicians.
Methods: In July 2011, family medicine clinical faculty were issued iPads for patient care and resident education. Faculty completed a pre-iPad survey designed and sent by the library. The survey polled the clinicians on work flow practices such as how and with what frequency they obtain clinical and patient education information, and how efficient they feel their current practices are. To increase likelihood of faculty uptake of new technology, the librarian, in consultation with faculty, created an iPad resource page on the library's family medicine web page and led an instructional session covering installation and optimal use of a core group of mobile resources. In November 2011, faculty members will complete a post-iPad survey. The librarian will compare responses to the pre- and post-iPad surveys and report clinician feedback on work flow, advantages, disadvantages, and limitations to using iPads for patient care and education.

4:55 p.m.
Information Use and Mobile Devices in Medicine: A Multi-University Study
Lee-Anne Ufholz, Director, Health Sciences Library, University of Ottawa, Ottawa, ON, Canada; **Jill Boruff,** Liaison Librarian, Life Sciences Library, McGill University, Montreal, PQ, Canada; **Dale Storie,** Public Services Librarian, John W. Scott Health Sciences Library, University of Alberta–Edmonton, Canada; **Helen Lee Robertson,** Liaison, Clinical Medicine, Health Sciences Library, University of Calgary, Calgary, AB, Canada; **Tania Gottschalk,** Associate Librarian, Neil John Maclean Health Sciences Library, University of Manitoba–Winnipeg, Canada; **Sherri Vokey,** Health Sciences Centre Librarian, Neil John Maclean Health Sciences Library, University of Manitoba–Winnipeg, Canada; **Dagmara Chojecki,** Research Librarian, John W. Scott Health Sciences Library, University of Alberta–Edmonton, Canada
Objectives: To investigate how students, residents, and faculty members in Canadian medical faculties use mobile devices such as smartphones (e.g., iPhone, Android, Blackberry) and tablet

computers (e.g., iPad) in their studies and professional environment. To explore what kinds of mobile-optimized information resources these users find most valuable and why, so academic health libraries can better support these users.
Methods: This study is a descriptive survey of medical faculties at five Canadian universities. An electronic survey was distributed by medical librarians at each university to medical students, residents, and faculty members via departmental email discussion lists, personal contacts, and posting to relevant websites. The survey investigates types of information sought via mobile devices, what kinds of mobile resources are considered valuable, how often and why mobile devices are used for medical information seeking, technology issues and support, familiarity with institutionally licensed resources, and personal purchasing of resources. Qualitative information regarding most recent use of a mobile device to answer clinical question was also solicited through a series of prompting questions. Participants could also choose to be contacted for a follow-up interview to provide additional context; however, interview results will not be presented here.
Results: Data from over 900 survey responses, demonstrating the trends at the 4 participating universities, will be presented.
Conclusions: The discussion will address how academic health libraries can effectively support mobile technology and collections in light of the survey results.

5:15 p.m.
iPads as a Tool to Enhance Communications and Access to Emergency Preparedness Resources
Cristina A. Pope, AHIP, Director, Health Sciences Library; **Donna K. Sowles,** Regional Resource Center Coordinator, Emergency Management; State University of New York Upstate Medical University–Syracuse
Description: We provided a pilot group of the Emergency Preparedness Regional Partnership (EPRP) with iPads and applications to determine whether or not the devices and applications would enhance communication amongst the partnership, communication during emergency situations, and access to emergency preparedness information resources. The EPRP consists of twenty-two regional representatives providing services to a large geographic area in upstate New York. Pilot participants were trained in device and application use. The presentation reviews what happened during our live event drill and discusses our communications challenges: managing iPads for a group as compared to an individual, large purchase savings for applications, Health Insurance Portability and Accountability Act implications, patient transfer issue, encryption, business associate agreements and more. Made possible by an award from the National Network of Libraries of Medicine, Middle Atlantic Region: #HHSN-276-2011-00003-C.

5:35 p.m.
In Practice: The Ins and Outs of Mobile Technology
Michael Garner, Medical Informatics Librarian, Harriet F. Ginsburg Health Sciences Library, College of Medicine, University of Central Florida–Orlando

Federal Libraries Section

Time for a Game Change: Growing Opportunities to Reinvent Our Roles

Cosponsored by Medical Library Education Section, Leadership and Management Section, Veterinary Medical Libraries Section, Retired Librarians SIG, Informationist SIG

WSCC, Room 615/616, Level Six

4:35 p.m.
Beyond Sabermetrics: Building a Framework for Long-Term Problem Solving Using Soft Systems Methodology
Robert E. Johnson, Clinical Services Librarian, Norris Medical Library, University of Southern California–Los Angeles
Objectives: A university medical library will create a framework for initiating and providing long-term services to a hospital using soft systems methodology (SSM). By utilizing the SSM model, a clinical services librarian will lead librarians from the health sciences library in creating long-term, system-wide solutions to the hospital's information support needs rather than merely addressing the hospital's existing situation and problems.
Methods: A recently hired clinical services librarian has responsibility for planning and providing library and other information services to an on-campus hospital recently acquired by the university. During an initial information-gathering period, the librarian has recognized the need to identify the information and educational needs of the hospital staff, assist faculty in integrating their clinical and academic efforts, participate in the implementation of an electronic health record, and repurpose an existing library reading room. With the assistance of the other librarians on the health sciences library staff, the clinical services librarian will utilize SSM to create and implement long-term strategies for meeting the challenges he faces. Using SSM, he will lead the library team in examining the current hospital environment, developing system-based perspectives and models for the environment, and comparing the models with the existing environment to identify hospital solutions.
Results: My results are not yet complete.
Conclusions: Analysis of project still ongoing.

4:55 p.m.
Hitting a Grand Slam: The State of the Art in Library-Based Bioinformatics Support
Michele Tennant, AHIP, Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; **Mary Edwards, AHIP,** Distance Learning and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Rolando Garcia-Milian,** Basic Biomedical Sciences Librarian/Liaison, Biomedical and Health Information Services, Health Science Center Libraries; **Hannah F. Norton, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; University of Florida–Gainesville
Objectives: Library-based bioinformatics support is increasingly commonplace in biomedical libraries. Some libraries hit grand slams, with useful and highly utilized programs, while others have struck out or experience tension among teammates. This project identifies characteristics of successful library-based

bioinformatics support programs. Project results may have implications for other new programs or services, particularly those outside the traditional library realm.
Methods: Objective and qualitative data were collected using a mixed methods approach of semi-structured interviews, focus groups, and surveys, focusing on identifying best practices in library-based bioinformatics support services, provider education, marketing, and funding models. The role of libraries in the provision of bioinformatics support and of librarians and nonlibrarians in providing these services were explored. Onsite interviews (library directors/bioinformatics support providers) and focus group sessions (librarians/other library staff) were performed at three biomedical libraries recognized for their bioinformatics support services. Data were analyzed, and major and minor themes identified. Separate surveys were administered at the national level to four populations: bioinformatics support providers, library directors employing such professionals and those without such professionals, and public services librarians. Survey data collected in 2008 and 2012 were analyzed, with responses compared among the populations, over time, and to the themes previously identified.
Results: Survey data suggest bioinformatics support specialists and the library directors who employ them have similar perceptions regarding the skills, attributes, and science-related education required for successful bioinformatics support services, while librarians and directors without such specialists place a greater emphasis on the need for a master's of library and information science (MLIS) or equivalent. Librarians who serve researchers perceive a greater need for bioinformatics services to be well integrated into traditional library service than do either library directors or the bioinformatics support specialists they employ. Most responding bioinformatics support specialists provide numerous non-bioinformatics-related services at their libraries, although there was little agreement among respondent categories regarding the appropriateness of reference and other traditional service provision by non-MLIS bioinformatics support specialists.
Conclusions: Although study results suggest a perception divide with bioinformatics support specialists and the directors who employ them on one side, and librarians and directors without bioinformatics support specialists on the other, survey, interview, and focus group discussions suggest ways in which to create a more successful and harmonious team. Transparency—regarding expectations, education, integration, responsibilities, and even "why bioinformatics in the library"—is one key element that can create that winning team environment.

5:15 p.m.
Data Management Planning: A Role for the Embedded Librarian
Susan M. McGuinness, Interim Director, Biomedical Library, University of California–San Diego, La Jolla, CA
Objectives: The objectives of this project were to implement methods to promote and assist with data management planning as researchers respond to increasing demands for sharing products and data resulting from government-funded research and to demonstrate a valuable new role for the embedded health sciences librarian.
Methods: The University of California-San Diego (UCSD) Libraries' new three-year strategic plan presented an opportunity for a health sciences librarian to embrace a new role in a changing environment. She volunteered to serve on an implementation team to further the strategic direction to make research data more openly discoverable and accessible. As a health sciences domain expert, she acted as a faculty liaison for the libraries' research data curation program. She learned and used data interview techniques to communicate with researchers about their data management needs, helped evaluate an online data management planning tool, and created and delivered data management planning (DMP) classes for faculty and librarians. The DMP classes covered the value of open data and data management and how to comply with funder requirements.
Results: Results will be presented on researchers' needs, library data curation services, DMP class evaluations, and solutions to overcome barriers to data management. The online data management planning tool, available to the public, will also be presented.
Conclusions: By learning about and promoting data management planning, librarians gain a unique opportunity to develop relationships with nonteaching faculty researchers, a user group that can be challenging to reach. Data management planning represents a common purpose where librarians' expertise and services, beyond providing online information resources, are recognized and valued by researchers.

5:35 p.m.
Expanding the Definition of Research Support: Nontraditional Roles for Librarians in Biomedical Research
Betsy Rolland, Project Manager/PhD Student, Public Health Sciences, Fred Hutchinson Cancer Research Center, Seattle, WA; **Emily J. Glenn,** Librarian, Seattle Biomedical Library, Seattle Biomedical Research Institute, Seattle, WA
Objectives: To investigate the nontraditional roles of librarians in the ever-changing world of biomedical research. As research becomes increasingly information and data intensive, librarians in biomedical research are expanding their reach by joining research teams and expanding the definition of research support.
Methods: The authors interviewed fourteen librarians and information professionals involved in supporting biomedical research at universities and research institutes across the United States. The interviews were conducted using a semi-structured instrument, then transcribed and coded using a grounded theory approach. This research was funded by the Special Libraries Association.
Results: Seven themes emerged from our interviews as areas of focus for our participants, including services, research environment, innovation, outreach, funding, metrics and success, and professional identity. This paper will focus on the research environment theme.
Conclusions: Participants had a deep understanding of the research environment, achieved through not only previous educational and professional experience, but also through proactive professional development. Study participants used various outreach and service delivery strategies to achieve integration with research team clients at their institutions. Additionally, they had expanded their own definition of research support by engaging in original research with investigators.

Hospital Libraries Section

Librarian as MVP of the Patient Safety Team

Cosponsored by Complementary and Alternative Medicine SIG

WSCC, Room 612, Level Six

4:35 p.m.
Patient Safety: Get on Base
Lorri Zipperer, Cybrarian, Zipperer Project Management, Albuquerque, NM

5:01 p.m.
The Value of Health Libraries and Information Services for Clinical Decision Making and Patient Safety
Joanne Marshall, AHIP, FMLA, Professor, School of Information and Library Science, University of North Carolina–Chapel Hill; **Julia Sollenberger, AHIP, FMLA,** Director, Medical Center Libraries and Technologies, Edward G. Miner Library, University of Rochester, Rochester, NY
Objectives: The objective of this multisite study was to understand the value and impact of library-provided information resources and services on patient care. A community-based collaborative research process was used to design the survey data collection instruments and protocol. Particular areas of interest in the study included impact on clinical decision making and avoidance of adverse patient events.
Methods: Physicians, residents, and nurses at 118 hospitals were asked to respond to an online survey based on a recent critical incident in which they had searched for information related to a patient care using library-provided information resources. Specific questions were asked about the value and impact of the information on quality of care and the avoidance of adverse events such as additional tests and procedures, misdiagnosis, adverse drug reactions, medication errors, and patient mortality. The survey also asked about the importance of information sources such as colleagues, lab tests, and diagnostic imaging. Selected interviews were conducted with health professionals to further explore the value of the library and the changing roles of librarians in health care settings. The study is expected to provide specific details about the perceived value of library services for clinical decision making.

5:28 p.m.
Team up and Hit It Home!
Elaine Alligood, Informationista and Chief Library Service, Knowledge, Information, and Library Services, VA Boston Health Care System, Boston, MA

Medical Informatics Section

Triple Play: The Librarian's Roles in Bioinformatics Training, Research, and Resource Development

Cosponsored by Public Services Section, Molecular Biology and Genomics SIG, Libraries in Curriculum SIG, African American Medical Librarians Alliance SIG

WSCC, Room 619/620, Level Six

4:35 p.m.
Leading an Interdisciplinary Team to Create Gene Indexing Bioinformatics Software
Caitlin Sticco, National Library of Medicine Associate Fellow, National Library of Medicine, Bethesda, MD
Objectives: This case study examines the role of a librarian as a project leader in bioinformatics software development with an interdisciplinary team of scientists, programmers, and librarians. This study highlights the value of a medical librarian as a catalyst, leader, and resource for interdisciplinary research and suggests pathways for other librarians to lead interdepartmental research projects.
Methods: A librarian at a large research institution, the National Library of Medicine, led a project team consisting of an indexer, a software engineer, a machine learning (ML) researcher, and a natural language processing (NLP) researcher. This team created an application that performs several key tasks in the gene indexing workflow: identifying genes in MEDLINE titles and abstracts, suggesting links to the appropriate Entrez Gene records, and suggesting candidate sentences from which to derive short annotations known as gene Reference Into Functions (geneRIFs). The librarian was responsible for the project, from proposal to completion over the period of a year, including generating institutional support, coordinating the project team, directing research strategy, and providing research resource support. Project success was evaluated based on software performance, reception of the software by indexers, and the willingness of project participants and supporters to pursue further research in this domain.
Results: The prototype software met our performance expectations. Due to this success, the project was extended for an additional year to allow further improvement, expansion, and implementation in the indexing work flow. Support for the project has been consistent across management, indexers, researchers, and developers. The index section and individual indexers have been enthusiastic about the progress of the project, with volunteers participating in focus groups and offering feedback and suggestions via phone, email, and in person. The entire development team continues to work on the project, and additional personnel have taken on roles as the project has expanded. Actual implementation and work flow testing has been eagerly anticipated, suggesting that a practical, operational focus is instrumental in keeping the work relevant and exciting to a broad base of supporters.
Conclusions: Many skills relevant to interdisciplinary project management are native to librarianship. Traditional library skills that were effective in this case included literature search and review, consensus-oriented teamwork, and data organization and management. However, a significant amount of knowledge and competency related to informatics, software engineering, and

genetics in this project were required from outside of normal library education. Subject area knowledge was critical for gaining the confidence of team members, using effective strategizing and judgment, and managing and recognizing team efforts. A broad background was required for the librarian to act as the translator and bridge between management, technical services, and software developers. With a broad base of knowledge, biomedical librarians who take on interdisciplinary leadership roles are in a key position to operationalize research, influence research agendas, and provide an encompassing vision for the direction of biomedical libraries.

4:51 p.m.

Covering the Bases: Running a Library-Based Bioinformatics Service at a Health Sciences University

Carrie L. Iwema, Molecular Biology Information Specialist; **Ansuman Chattopadhyay,** Head, Molecular Biology Information Service; Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA

Objectives: There is an increasingly vast array of databases and specialized software tools for designing, interpreting, and validating scientific experiments and results. However, researchers are not necessarily aware of all of the resources at their disposal, much less how to use them. To help users connect to this information, we provide assistance via a "4-pronged" library-based molecular biology information service.

Methods: Our 2-person team provides 4 primary services. 1st base (prong 1): We offer a variety of consultation options: in-person, email, phone, webinar. 2nd base (prong 2): We negotiate contracts, administer registrations, and troubleshoot over fifteen licensed bioinformatics tools. 3rd base (prong 3): We participate in the medical school curriculum and teach over twenty unique hands-on workshops on general topics (e.g., cancer informatics) and specific licensed tools (e.g., Vector NTI), multiple times a year. Home plate (prong 4): We maintain a comprehensive website with access to workshop materials, licensed tool information and tutorials, a searchable video collection covering common and specific biomedical queries, and a specialized search tool providing quick access to more than 2,800 major bioinformatics databases and software tools as well as relevant literature, seminars, and protocols. We strive to continually add content and value to our users as we run these bases.

Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

5:07 p.m.

Supercharging 'Omics Research with a Library-Based Bioinformatics Service

Yibu Chen, Program Coordinator; **Meng Li,** Bioinformatics Specialist; **William A. Clintworth,** Associate Dean, Health Sciences Libraries, and Director; Norris Medical Library, University of Southern California–Los Angeles

Objective: For a health sciences library to develop and assess the value of a broad-based bioinformatics program (including a high-level consulting and data analysis service, one-on-one instruction as well as group training opportunities, and campus access to specialized data analysis tools and databases) for faculty, postdoctoral fellows, graduate students, and researchers in a university setting.

Methods: In 2005, the University of Southern California (USC) Norris Medical Library (NML) hired a doctoral-degreed nonlibrarian with a background in molecular genetics to begin the program. A second nonlibrarian with advanced degrees in biochemistry and bioinformatics was added in 2010. The NML initially subscribed to three commercial data analysis tools. The bioinformatics specialists developed and taught in-house workshops and sponsored workshops by the National Center for Biotechnology Information (NCBI) and commercial vendors. A website was created to serve as a centralized source of bioinformatics resource information. Numerous presentations were made to groups and several key individuals in campus leadership positions to build awareness about and financial support for the program. In 2010, a needs analysis survey was conducted to obtain feedback on the service and to identify additional bioinformatics needs of the research community that were still not being met.

Results : As a result of persistent promotion of the program to key stakeholders including the associate deans of research from several schools, high-profile and respected faculty researchers throughout the university, and the USC Provost's Office of Research, a solid foundation of support was developed. The campus-wide bioinformatics needs assessment survey conducted in 2010 yielded 254 responses, which included 97 faculty members. The results unequivocally demonstrated how critical the need was for a greater university involvement in bioinformatics infrastructure support. Respondents uniformly expressed a strong desire for additional data analysis tools and instruction in their use. The survey along with supporting letters from faculty and principal investigators and recommendations from a specially appointed bioinformatics review committee resulted in the university increasing financial support for the library's bioinformatics program. An additional $107,000 was provided for subscription-based commercial bioinformatics software. Six new bioinformatics software tools were added to our collection in August 2011. Over 400 users requested access to the new software in the following months, bringing the total registered users to 972 and an average annual growth rate of over 50% since 2008. The increased resources and personnel added in 2010 enabled us to provide bioinformatics support to more users: from 2007 to 2012, annual user consultations rose from 73 to 177, and workshop attendance from 137 to 1134, respectively.

Conclusions: Fueled by a torrid growth of 'omics data, the essential bioinformatics needs of the university's research community can no longer be met without substantial university-level infrastructure support. By basing this program in the "school-neutral" library, all faculty, postdocs, graduate students, and other staff are able to benefit from access to these powerful analysis tools rather than only investigators in individual well-funded labs.

5:23 p.m.

Hitting a Home Run with Bioinformatics Support

Medha Bhagwat, Informationist/Bioinformatics Specialist, NIH Library; **Lynn Young,** Bioinformatics Scientist, NIH Library, Office of Research Services; National Institutes of Health, Bethesda, MD

Objectives: The National Institutes of Health Library sought to establish a bioinformatics support program for the institute researchers' and clinicians' endeavors to understand the molecular mechanisms of human disease. The goal was a four-fold program—training, consultation, software licensing, and data

analysis—to provide support in all aspects of bioinformatics, including accessing data from databases and biological interpretation of large data sets.
Methods: The program was born out of a survey of needs of institute scientists. Initiating the program involved hiring a well-established bioinformatics expert, steeped in the problem-based, paired problem method of hands-on training. Classes covering the entire range of bioinformatics were offered both on-site and remotely to other medical academic libraries. The staff became involved in the institute graduate curriculum by teaching a two-credit-hour course in practical bioinformatics. The program went beyond tutorials to offer consultations and collaborations on researchers' projects, including data analysis, algorithm development, and computer programming. Choice of software licenses relied on polling of patrons. High performance computer workstations were purchased for analysis of data from high-throughput experiments from technologies such as microarray and next generation sequencing. Furthermore, a web portal was developed, including the above information and a list of molecular biology and bioinformatics resources.
Results: Even though the program is only 2 years old, the bioinformatics classes and training have been wildly successful with over 2,500 researchers attending classes and over 275 consultations provided. In times of a high volume of requests, researchers have been willing to wait weeks for an appointment. A second expert was hired to cover requests for help with data analysis and computer programming. Thirteen licensed software products are now available for large data set analysis and interpretation of lists of differentially expressed genes. Some products run solely on the library bioinformatics workstations, and others run on both these computers and patrons' lab computers. Much of the information about the program is available through the web portal (nihlibrary.nih.gov). Additionally, a general list of resources is maintained at nihlibrary.nih.gov/ResearchTools/Pages/molbioIndex.aspx.
Conclusions: This young but very successful bioinformatics support program can serve as a model for setting up a new bioinformatics support program at a medical or health library.

5:39 p.m.
Distant Hands-on Virtual Bioinformatics Training
Alexa Mayo, AHIP, Associate Director, Services, Health Sciences and Human Services Library, University of Maryland–Baltimore; **Medha Bhagwat,** Informationist/Bioinformatics Specialist, NIH Library, National Institutes of Health, Bethesda, MD; **Craig Locatis,** Educational Research Specialist, Office of High Performance Computing and Communications, National Library of Medicine, Bethesda, MD
Objectives: This paper discusses the successful delivery of hands-on bioinformatics training at a distance that emulates in-person training at an on-site computer lab. It outlines a collaborative program that supports researchers' complex training needs, including the special requirements of remote molecular visualizations.
Methods: A library with an active bioinformatics support program offers eight different classes in its bioinformatics training series. The program instructor communicates with students via videoconference, while using desktop sharing software to show slides, live molecular visualizations, and web resources for searching and analyzing genome information. Similar desktop sharing software is used on student computers at distant computer labs. This enables the instructor to observe and provide remote, interactive assistance to individual students during hands-on exercises. Six academic health center libraries participated in the virtual bioinformatics training program in 2010/2011. Several sites received remote instruction simultaneously. This paper includes the perspective of the instructor and host site managers as it reports on the successes and challenges of delivering bioinformatics training at a distance. It focuses on class content, staffing and special technology requirements, promotion strategies, and a vision for future training.
Results: Six academic health center libraries participated in the virtual bioinformatics training program in 2010/11. Participants' evaluations of the program were positive.
Conclusions: There is a need for hands-on bioinformatics training for researchers. One way to meet the need is to offer instruction remotely, by using videoconferencing and desktop sharing software. The program instructor, information technology support staff, and the site coordinator must work together to ensure that the training is effective.

Relevant Issues Section

Minority and Underserved Nontraditional Populations: Health Care Information for All

Cosponsored by Corporate Information Services Section; Pharmacy and Drug Information Section; International Cooperation Section; Lesbian, Gay, Bisexual, and Transgendered Health Science Librarians SIG

WSCC, Room 604, Level Six

4:35 p.m.
The Jacksonville Health Literacy Outreach Project
Kathleen Moeller, AHIP, FMLA, Director, Borland Health Sciences Library, University of Florida–Jacksonville
Objectives: The two-year Jacksonville Health Literacy Outreach Project, funded by the National Network of Libraries of Medicine, Southeastern/Atlantic Region, had several goals. First was to assess the current health literacy levels of the minority, inner-city, faith-based target group and to develop an action plan based on the assessment. Second was to teach health literacy classes at the target group's site and to measure the results.
Methods: Health Zone One in Jacksonville has the highest rate of heart disease, diabetes, low birth-weight infants, teenage pregnancy, asthma, HIV/AIDS, sexually transmitted diseases, and hospitalization and emergency room visits in the county. Only 32% of residents have completed high school. Borland Library partnered with a local inner-city faith-based institution in Health Zone One with a congregation of approximately 300 people. After institutional review board approval, health literacy levels of the congregants were assessed using the survey instrument titled "The Newest Vital Sign." A demographic questionnaire was used to gather general information. Based on the results, a curriculum developed by the Florida Literacy Coalition was used as a base, augmented by other materials. Eight one-hour health literacy classes were taught at the church, and there were 92 attendees. Pre and post questionnaires were used to measure results.
Results: Results of the health literacy levels were higher than expected. Twenty-two percent of respondents had the likelihood or possibility of low health literacy, but 78% had adequate health literacy. The demographic survey revealed that while 60% have

a computer in their homes, less than 30% have access to the Internet at home. Pre-assessment questionnaires were given only before the first 4 classes, and 21 questions were asked. An average of only 9 questions, or 42%, were answered correctly. The same 21 questions were asked on the post assessment questionnaire, and an average of 16 questions, or 76%, were answered correctly.
Conclusions: This project clearly demonstrated that low health literacy levels can be raised by teaching interventions by medical librarians. It was important to approach the target group on its own turf, because the church is in a violent and dangerous inner-city area, and the classes were taught in the evening. Lessons learned were several. Much basic health information is misunderstood. Many people do not know that "RX" means prescription. Expense is a major reason for noncompliance, and many home remedies are used instead. Internet access is not readily available to many inner-city residents, and this impacts the curriculum presented.

5:01 p.m.
Health Information Needs through the Eyes of Refugee Populations
Margaret (Peg) Allen, FMLA, Consultant, Health Knowledge Consultants, Stratford, WI
Objectives: From proposal development in 2001 to the present, the Hmong Health Information Network (www.hmonghealth.org) evolved based on social marketing principles. What do refugees want to know about Western health care? How do they develop trust in the patient-provider relationship? What health issues do they have when they arrive from refugee camps, and how does this change as they integrate in American communities? Are Hmong refugee needs similar to those of new refugee populations?
Methods: Needs assessment methods used in our health education projects include focus groups, key informant interviews, brief surveys at health fairs, and inclusion of refugees in ongoing project planning. Refugee health providers are project partners, participating in planning, implementation, and evaluation via a variety of community partnerships.
Results: Key findings included preference for bilingual approach, with written materials (print and web) in columns matched at the paragraph level; extensive use of graphics including anatomy drawings; use of English text or subtitles on audiovisual resources; and preference for education at the provider-patient level with a bilingual health advocate/interpreter. Workshop planning allowed for interpretation and audience questions. Translations should be done by native speakers and include more than one dialect when warranted.
Conclusions: Developing health information websites, resources, and programs based on refugee choices is time consuming, but following social marketing principles better meets their needs .More attention needs to be spent on developing trust in the patient-provider relationship, including development of the bilingual health advocate role. Key challenges have been matching refugee health information needs with requests for proposals that focus on either consumers *or* health providers, but not on the patient-provider-interpreter relationship. There is an ongoing need to develop interpreter health literacy, including bilingual second generation refugee staff and family members. Lessons learned from first generation Hmong refugees can be applied to developing resources and services for new refugee groups.

5:28 p.m.
Setting up Small Hospital Medical Libraries in Developing and Resource Poor Areas
Arlene G. Cohen, Pacific Islands Library Consultant, Ayuda Foundation, Agana, Guam, Seattle, WA; **Alice E. Hadley, AHIP,** Medical Librarian, Medical Library, US Naval Hospital, Barrigada, Guam
Objectives: Two Robert Wood Johnson Foundation grants awarded to the Ayuda Foundation (Guam) to establish or rebuild nine hospital medical libraries in the US-affiliated Pacific Islands will be described. The project can serve as a model for establishing small hospital libraries in developing and resource poor areas throughout the world.
Methods: The presentation will include a brief history of how the grant proposals came about, the needs survey to support the justification for the hospital medical libraries, a description of commitments embodied in the Memorandums of Understanding between the funding agency and health ministers in the nine US- affiliated Pacific Islands that were fundamental to the sustainability of the libraries, and the steps taken in planning and implementing the grants.
Results: By November 2010, nine hospital medical libraries were established, with the potential of being sustainable over time. Each library was created as planned, and the information technology put in place. Although most of the medical librarians have no formal training in librarianship, a one-week training workshop was held in November 2010, and ongoing audio conferences are help every two months. The goals of having a medical librarian with their tasks documented and their workspace in the library, as well as the library predictably open with library hours posted, has not been completely reached in all the libraries.
Conclusions: There were many challenges faced in establishing these libraries and assuring their long-term sustainability. The primary challenges are in the areas of human resources, long-term funding for new resources, and maintenance of the technology in place. These issues will be presented in the paper.

Research Section

Spring Training: Statistical Literacy and Techniques in Library Research and Practice

Cosponsored by Public Health/Health Administration Section, Molecular Biology and Genomics SIG

WSCC, Room 613/614, Level Six

4:35 p.m.
Librarians Teaching Critical Appraisal: Assessment of Evidence-Based Medicine Competency of Fourth-Year Medical Students Using an Adapted Fresno Test-Based Exercise
Stephanie J. Schulte, Assistant Professor/Education and Reference Services Coordinator; **Carol A. Powell, AHIP,** Associate Professor; John A. Prior Health Sciences Library, Ohio State University–Columbus
Objectives: To discuss the development, implementation, and grading of an online module teaching fourth-year medical students to apply advanced concepts of question and search strategy formation, consider available resources for finding answers, and develop competencies to critique relevant journal articles using statistical and critical appraisal knowledge gained from attending an immersion-type evidence-based health care workshop and existing librarian expertise.
Methods: An online evidence-based medicine module was created in collaboration with the codirector of the ambulatory care rotation. The self-directed module includes online resources, journal articles on evidence-based medicine and critical appraisal, a rubric adapted from the Fresno test providing both formative and summative assessment information, and a video explaining the rubric. Students are divided into groups for the first three weeks for formative work and receive weekly feedback from a librarian based upon the rubric. During the fourth week, each individual student completes a final summative quiz involving in-depth analysis of data in an article selected from three options addressing a random patient/problem, intervention, comparison, outcome (PICO) question supplied to them. Librarians grade their submissions using the rubric as a guide, assessing common measures of validity and statistical magnitude and significance. Students must successfully complete the final quiz to graduate.
Results: Teaching an advanced online evidence-based medicine module has been both rewarding and challenging. Challenges include the amount of time required for grading and providing feedback and learning to clearly and concisely communicate information about the module to support student success. Rewards include developing a deeper understanding of biostatistics and other aspects of critical appraisal, and beginning to understand strengths and weaknesses of students' critical appraisal abilities. Preliminary findings from content analysis related to the course will be presented.
Conclusions: With proper training and opportunity, health sciences librarians can successfully teach critical appraisal to medical students and other health sciences students.

4:55 p.m.
Results of a Survey Exploring the Roles of Academic Health Sciences Librarians in Health Research
Thane Chambers, Research Librarian, John W. Scott Health Sciences Library, University of Alberta–Edmonton, Canada
Objectives: Over the past twenty years, there has been a huge increase in the expectations around the roles of health librarians working with health researchers, particularly for librarians in academic institutions with a strong research focus. Roles for librarians can include literature searches, systematic review searches, data analysis, and writing of sections of research papers. This session explores these roles.
Methods: Findings from a web-based survey will be presented. This survey is the first stage of an MLA-funded research project exploring the following research questions: How do academic health librarians contribute to health research? What type of health research work are academic health librarians currently conducting? What are the specific tasks they perform? Is there a standard set of research work done by academic librarians or does it differ? If it differs, is there a basis for this difference. Survey participants will be academic health sciences librarians working in Canada and the United States. Survey data will be collected in English and in French. Data will be analyzed using qualitative and statistical software. The goal of this survey is to have a clearer view of the specific roles librarians play in health research and librarians' perceptions of these roles.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

5:15 p.m.
The Analysis and Translation of Unpublished Health Sciences Data: Extra Innings for the Library Profession
Susan Corbett, AHIP, Vice President, North Carolina Biotechnology Center–Research Triangle Park; **David Potenziani,** Executive Director, National Collaborative for Bio-Preparedness, University of North Carolina–Chapel Hill; **Susan Corbett, AHIP,** Vice President, Library and Information Services, North Carolina Biotechnology Center–Research Triangle Park
Objectives: Academic health sciences librarians will fulfill their progeny in the data-information-knowledge continuum by developing access to and management of raw health sciences data by recruiting librarians with statistics expertise, developing a prominent data portal, providing research commons with technology and data analysis or presentation applications, and offering data analysis or presentation training for library users.
Methods: The early detection of natural or man-made health disasters has not kept pace with the advances in technology's ability to gather and analyze data confounded by the inability to integrate and analyze disparate data sources (e.g., emergency rooms, public health departments, Centers for Disease Control and Prevention, veterinary hospitals, food supplies, water sources, etc.). Such capacities would provide an accurate, early picture of a health event. The author's experience as project manager of a bio-surveillance grant through the Department of Homeland Security utilizing "i Rule Oriented Data Systems" (iRODs) and new data analysis techniques developed by SAS will be shared as a data access and management model that is within reach of academic health sciences libraries. With the emphasis of speeding information from bench to bedside, the library's new data analysis and translation capability would establish the library as a key health care participant.
Results: With the utilization of iRODs, cloud computing, and SAS statistical analysis innovations along with the collaboration of data rich agencies (i.e., emergency rooms, poison centers,

public health departments, food suppliers), the ability to detect the pathogen and the physical origin (i.e., location) of an outbreak demonstrated the ability to allocate resources earlier in the intervention process thus saving lives and reducing illness. The integration of an experienced health sciences librarian as project manager in the above revealed a close connection between published, peer-reviewed data and raw data that are expertly cleaned, analyzed, and translated into compelling visualizations.
Conclusions: Health sciences libraries in research settings are immersed in the knowledge side of the data-information-knowledge continuum with growing emphasis on providing published, peer-reviewed data. Librarians are ready to take the next step toward raw data analysis service, beginning with the recruitment of a librarian with a strong statistics background; creating a prominent data access portal through the library's website; designing a research commons consisting of hardware and applications to conduct statistical analysis along with presentation software; conducting introductory workshops for faculty, staff, and students who do not have ready access to biostatisticians; and providing a data help desk.

5:35 p.m.
Hitting a Home Run: Statistician Consults at the AG-VET MED Library Improve Research Design Quality
Ann Viera, Associate Professor, Veterinary Librarian, Pendergrass AG-VET MED Library, University of Tennessee–Knoxville
Purpose: This paper describes the creation and ongoing activities of a four-year partnership between a librarian and a statistician to improve the quality of research studies through early and convenient access to statistical consulting on research design, statistical computing, and data analysis.
Setting/Participants/Resources: The service is provided in a library focused on agriculture and veterinary medicine at a public land-grant university by a consulting statistician from Research Computing Support (Office of Information Technology) assigned to the Institute of Agriculture. It is promoted and supported by the veterinary librarian and library staff. Faculty, staff, and graduate students of the university benefit.
Brief Description: Building renovations had forced the statistician to relocate to the library around the time the librarian realized that researchers needed support with questions of sample size and research design earlier in the process. This prompted the librarian to take a new approach to helping researchers by inviting the statistician to offer research support appointments two days a week in a designated library location.
Results/Outcome: The partnership helped both market their complimentary research services. Consistently, investigators commented that they were very grateful to know about the statistician's services and convenient logical location. Demand rose; a second statistician began consulting in January 2012. The librarian hopes that actively marketing the statisticians' services contributes directly to animal welfare through improved research design and statistical analysis. The statistician's library office hours have reinforced the library as a locus for research services and collections.
Evaluation Method: Statistical consultants may keep office hours at research libraries, largely for social science research support. Review of the scarce literature on different models for partnerships between librarians and statisticians will make librarians wishing to support improved clinical and basic research design aware of the pros and cons and effort involved.

Technical Services Section

Stepping Up to the Plate with New Concepts of Data: Resource Description and Access, Semantic Web, Linked Data

Cosponsored by Collection Development Section, Molecular Biology and Genomics SIG

WSCC, Room 602/603, Level Six

4:35 p.m.
How the Semantic Web Is Moving Research Networking Software into the Major Leagues
Kristi Holmes, Bioinformaticist, Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO; **Layne Johnson,** Translational Science Information Specialist, Health Sciences Libraries, University of Minnesota–Minneapolis
Objectives: Various research networking software systems have enabled researchers to collaborate for nearly a decade. Only recently have ontology and linked open data standards provided the potential to unleash the power of research networks regardless of specific platform design. Librarians have assisted in the evolution of these tools and have provided guidance in their organization, design and promotion.
Methods: A variety of research networking tools exists. Some are open source, like VIVO and Profiles, while others are available through commercial vendors. Although some progress has been made to connect these systems through national networks like direct2experts, the full potential of research networking has just begun to be recognized. Developments in ontology structure and standardization and linked open data standards like resource description framework (RDF) are common for the VIVO platform but are just beginning to be adopted by other systems. In this presentation, we will discuss the benefits of semantic web-enabled research networking systems and will discuss how various information sources, including grants and patents, are being used in semantic web formats to enhance expertise identification and researcher collaboration. The roles of librarians in the development, implementation, and maintenance of research networking systems will be described.
Results: Librarians are successfully stepping up to the semantic web plate in a variety of roles related to institutional research networking platforms. Among the roles filled by library expertise are outreach and adoption activities, education and training on the use of the platform, ontology and controlled vocabulary expertise, and negotiations with data providers. Research networking also provides an opportunity for libraries to become familiar with many concepts around linked open data and the semantic web.
Conclusions: Research networking software systems are becoming a critical piece of the research puzzle in institutions, organizations, and agencies, worldwide. The rich data afforded by platforms that leverage semantic standards can enable new level of tools and work flows, which will improve science and facilitate research discovery across disciplinary and organizational boundaries.

5:01 p.m.

Research Data Needs Assessment and Program Planning

Hannah F. Norton, AHIP, Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Rolando Garcia-Milian,** Basic Biomedical Sciences Librarian/Liaison, Biomedical and Health Information Services, Health Science Center Libraries; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; **Cecilia E. Botero,** Associate Dean, George A. Smathers Libraries, and Director, Health Science Center Libraries; University of Florida–Gainesville

Objectives: In order to support the storage, organization, and sharing of research data, libraries must be familiar with existing data services, management practices, and workflows within the organizations and disciplines they serve. The Health Science Center library (HSCL) and institutional collaborators performed a multimodal assessment of local research data needs to inform development of data strategies and services.

Methods: In order to step up to the plate and provide new research data services, the HSCL collaborated with our high performance computing center (HPCC), other campus libraries, and departments (institutional repository) to assess local data service needs and overall data environment. As a pilot project, an online survey was offered to members of our Clinical and Translational Science Institute (CTSI), representing over 500 faculty from a variety of disciplines. Questions addressed existing practices and future needs related to the data lifecycle including collection, storage, protection, analysis, and sharing. In-depth interviews were conducted with researchers from the CTSI, other health sciences center units, and high-level administrators having a major role in the research enterprise.

Results: Survey responses reflected the variety of ways that CTSI members are managing their research data. On the clinical research side, protection of patient data was frequently mentioned, with an upcoming integrated data repository viewed as a potential means for bridging the gap between clinical and research data while maintaining privacy protections. Existing data-related resources on campus such as the HPCC and CTSI-supported REDCap data capture system are highly lauded by those who use them but largely unknown by others. Interviews further illuminated the fact that faculty have difficulty defining the scope of e-science and research data management.

Conclusions: Researchers are largely unaccustomed to thinking about their data management practices and needs, but it is clear that both infrastructure and behavioral change are needed to best manage research data in the future. Future collaboration with campus information technology and research units will be vital in tackling the broad range of issues surrounding research data management.

5:28 p.m.

Resource Description and Access and the New Bibliographic Framework: Moving Library Data to the Semantic Web

Sharon Willis, Senior Cataloging Specialist, National Library of Medicine, Bethesda, MD

Section Programs 2

Monday, May 21, 10:30 a.m.–noon

Chiropractic Libraries Section

Complementary and Alternative Medicine (CAM): Evidence, Bias, and Use….Oh, My!

Cosponsored by History of the Health Sciences Section

WSCC, Room 602/603, Level Six

10:35 a.m.
Cochrane Complementary and Alternative Medicine Systematic Reviews: An Analysis of Authors' Comments on the Quality and Quantity of Evidence and Efficacy Conclusions
Robin A. Paynter, Research Librarian, Oregon Evidence-Based Practice Center, Oregon Health & Science University–Portland
Objectives: To assess systematic review authors' published comments on the quality and quantity of complementary and alternative medicine evidence and its effect on their subsequent conclusions regarding complementary and alternative medicine's (CAM's) efficacy for their topic.
Methods: Randomly select representative sample of CAM systematic reviews listed in the Cochrane Database of Systematic Reviews. Qualitative analysis of the discussion and author's conclusions sections to determine the nature of comments on the quality (e.g., sample sizes, study design, etc.) and/or quantity of evidence available for their topic and their conclusions for clinical practice (e.g., insufficient evidence, inconclusive evidence, efficacious treatment, etc.).
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

10:55 a.m.
"Alternative" Research Education in a Post-R25 World: Assessing Acupuncture and Oriental Medicine (AOM) Student Attitudes Toward Research and the Scientific Method
Candise Branum, College Librarian, Oregon College of Oriental Medicine–Portland
Description: How do alternative medicine students feel about "research" and the scientific method? In the post-R25 age of research education, have the levels of distrust towards the western research paradigm in its ability to adequately measure alternative medicine results been quelled, or do alternative medicine students view research as a nonessential part of their education? This follow up to a 2006 study seeks to tackle some of these questions by investigating the levels of research interest by acupuncture and oriental medicine (AOM) students, examining factors such as length of time in the program and the existence of an institutional culture of research.

11:15 a.m.
Complementary and Alternative Medicine's (CAM's) Research Agenda and Its Unique Challenges
Jane D. Saxton, Director, Library Services, Bastyr University, Kenmore, WA
Description: This presentation will briefly discuss major challenges to advancing a complementary and alternative medicine (CAM) research agenda, including: (1) the impact of current National Institutes of Health funding levels; (2) methodological issues in studying the efficacy of CAM therapies, especially whole systems (e.g., traditional Chinese, chiropractic, and naturopathic medicine); and (3) new developments in understanding placebo controls.

11:35 a.m.
Hitchhiker's Guide to One Corner of the Complementary and Alternative Medicine (CAM) Universe
Ron LeFebvre, Professor, Chiropractic Science, University of Western States, Portland, OR
Description: Chiropractic physicians can be seen as a group whose individuals are dispersed between the philosophical poles of vitalism and empiricism. Vitalists display an innate distrust of overreliance on the scientific method, while empiricists more readily embrace the classic precepts of evidence-based medicine. Even within this latter group, similar to their medical brethren, there is a wide range of opinions as to what constitutes minimally acceptable research evidence. An understanding of these issues—along with issues of relevance, scope of practice, and cultural preferences—can help inform medical librarians as they aide chiropractic physicians shop for information.

Corporate Information Services Section

Patient Advocacy: Meaningful User Needs Assessment

Cosponsored by Consumer and Patient Health Information Section, Relevant Issues Section

WSCC, Room 619/620, Level Six

10:35 a.m.
Assessing Consumers' Perspectives on Health Information Needs: Understanding Patients Who Value both Health Professionals and Oprah Winfrey as Mediators of Medical Knowledge
Shelagh K. Genuis, Post Doctoral Fellow, Centre for Health Promotion Studies, University of Alberta–Edmonton, Canada
Objectives: This paper assesses how women make sense of uncertain and evolving medical knowledge mediated by formal and informal sources. It investigates patients' understanding of "evidence" and their need for both "factual" and experiential information. Drawing on media complementarity theory, it explores how librarians can advocate for users who interact with diverse sources and types of knowledge.
Methods: Set in a context where health information is explicitly evolving, this study explores women's information needs and their strategies for integrating information from formal and informal sources. Semi-structured, qualitative interviews were conducted with samples of (1) women engaged in information seeking and gathering related to the menopause transition (n=28), and (2) health professionals (HPs) acting as information providers to this population of women (n=12). Recruitment occurred in the community and at a hospital-based menopause clinic. Interviews with women incorporated a narrative approach and in-the-moment elicitation. Women were presented with contrasting media articles to elicit reflection on media-mediated health information. HP interviews addressed themes arising from women's interviews, and HPs' roles as information providers. Data analysis

(facilitated by NVivo 8) incorporated directed content analysis guided by theory and grounded theory's constant-comparative method.
Results: Participants valued information about noncrisis health management that was incidentally encountered and deliberately sought from a wide range of formal and informal sources. Findings reveal that women moved fluidly between sources and that they constructed "evidence" as research, material object, negotiated belief, and lived experience. Whereas health professionals tended to be leery of information mediated by informal sources such as the Internet, interpersonal contacts, and the media, interviewed women looked to different forms of evidence to fulfill different information needs. Using Oprah Winfrey's foray into the topic of menopause management as an illustration, this paper demonstrates that complementarity, rather than displacement or competition, guided women as they made sense of formal and informal health information.
Conclusions: While many user studies in library and information science emphasize the user's perspective, librarians and information professionals working in health fields have tended to focus on their roles as mediators of formal information sources and research-based evidence. Findings from this study suggest that women viewed informal and formal health information as complementary and that health librarians have roles to play both as facilitators of formal information resources and as advocates for the user's perspective. In order to fulfill this latter role, librarians should move beyond an emphasis on "good" vs. "bad" information sources and, focusing on generic health literacy skills, view health information-seeking practices from the perspective of complementarity.

10:55 a.m.
Illuminating the Distinct Information Needs of Brain Cancer Patients and Their Caretakers During Routine Clinical Care
Jennifer A. Lyon, AHIP, Clinical Research Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Jessica Schumacher,** Assistant Professor, Health Services Research, Management and Policy, College of Public Health and Health Professions; **Erin M. Dunbar,** Assistant Professor, Department of Neurosurgery, and Co-director, Preston Wells Center for Brain Tumor Therapy; **Jennifer West,** Clinical Research Coordinator, Department of Neurosurgery, McKnight Brain Institute; **Mary Edwards, AHIP,** Distance Learning and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; University of Florida–Gainesville
Objectives: Brain cancer patients and their caregivers must make rapid, complex decisions while under shock. Our preliminary data suggest the specific needs of patients and caregivers are distinct. Effective, individualized information delivery toward each is critical, yet still poorly understood. Utilizing hypotheses derived from pilot investigations, we expand explorations into effective, individualized, and distinct information needs of patients and caregivers.
Methods: Participants were recruited from the Preston A. Wells, Jr. Center for Brain Tumor Therapy at the Shands Hospital at the University of Florida. During clinic visits, patients and their caregivers were invited to participate in semi-structured focus groups designed to elicit their preferences for diagnosis and treatment-related information, including content, format, source, and timing. Also, they were invited to give feedback on a tailored online resource. Audiotapes of the sessions were transcribed, removing any personal health information (PHI), and then thematically coded by blinded investigators until theme saturation was met.
Results: Caregivers play a vital role in health information seeking as patients are often too sick after diagnosis, when critical treatment decisions must be made. Regarding specific information needs, patients focused on immediate decision making regarding treatment and symptom relief, while caregivers were concerned with researching treatment and provider options, handling the practicalities of care and longer-term prognosis, and maintaining domestic life. Both reported being frustrated with the low reliability and overwhelming number of results from Internet search engines and responded positively to the new information resource.
Conclusions: Delivering the information needed to optimize decision making and outcomes for brain cancer patients and their caregivers is a significant challenge. Health care professionals must be sensitive and proactive in meeting those needs and must consider the importance of involving the caregiver early and often. Further, the addition of a health sciences librarian to the team can assist in the systematic delivery of reliable and high-quality information.

11:15 a.m.
Health Literacy Interventions: Training Health Care Professionals to Improve Caring for Older Adults
Gabriel Rios, Deputy Director, Lister Hill Library of the Health Sciences; **Channing Ford,** Associate Director, UAB Reynolds Program, Associate Director, UAB Geriatric Education Center, and Program Director II, Division of Gerontology, Geriatrics and Palliative Care; **Catherine Hogan H. Smith, AHIP,** Community Services Librarian and Project Director, Health InfoNet of Alabama, Lister Hill Library of the Health Sciences; University of Alabama–Birmingham
Objectives: To assess the health literacy (HL) competency of health care professionals working in geriatric clinical settings. To implement a training program to improve HL competence. To provide health care professionals with the tools necessary to effectively work with older adults. To assess patient satisfaction of health information received using selected questions from the Interpersonal Processes of Care in Diverse Populations Questionnaire (IPC).
Methods: To assess the HL competence of both patients and health care professionals (HPs) in a geriatric clinical setting, a three-part study is being conducted. This study will: (1) assess the patients' satisfaction level,(2) provide HPs with additional training in HL, and (3) conduct a post-training satisfaction follow-up survey. Selected questions from the IPC will be used to assess baseline patient satisfaction using SurveyMonkey. Patients or an intermediary will answer the IPC using iPads following their visit. HPs will complete a newly developed assessment tool to determine their level of HL competence. Assessments will be analyzed to identify gaps where additional education is needed. A specialized workshop will be developed and provided to improve the HPs' level of care for their patients. After the training intervention, a follow-up satisfaction survey will be released.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

11:35 a.m.
The Research Ironman: Collaboration, Outreach, and Evidence-Based Mental Health
Rienne Johnson, Reference Librarian; **Heather McEwen,** Reference Librarian; **Beth Layton, AHIP,** Deputy Director, Oliver Ocasek Regional Medical Information Center; Northeast Ohio Medical University–Rootstown
Objectives: During 2010–2011, librarians joined two departments committed to deploying evidence-based practice in mental health. One research project will inform an outreach strategy with clergy. Another collaborative project, the mental health symposium, plans on impacting practice through discussion and education.
Methods: Collaborative projects were undertaken. One was an interdisciplinary research project, a needs assessment to identify the mental health information needs of local clergy. The assessment was conducted to inform the strategy for an information intervention. Librarians acted as principal investigator, as background researcher, and as the study recruiter. The team included two researchers from the collaborating department. Librarians also participated in the development of a regional mental health symposium designed to impact practice through discussion sessions on clinical tasks, quality improvement, research, or resources. Librarians presented on mental health resources for providers and patients. Resource guides were created as a take-away for participants; this access impacted and informed practice. Both projects will continue to develop, and the collaborations will continue.
Results: The needs assessment delivered data that will inform the strategy for clergy information outreach. Librarian involvement was essential to the successful completion of the project. Library involvement at the mental health symposium and steering committee participation encouraged evidence-based collaboration with other departments to inform mental health practice. The resource guides have been widely publicized by center staff and continue to be used monthly. Project success has prompted collaborative partners to request continued involvement of library staff to advance current projects.
Conclusions: Library staff's activities in collaboration, outreach, and evidence-based mental health have set the bar for collaboration high. Our successful collaboration efforts demonstrate the role librarians can play as partners in health care delivery and the value library staff can provide to collaborative partners.

Educational Media and Technologies Section

Becoming a Better Teacher: How to Coordinate, Execute, and Assess Instruction

Cosponsored by Libraries in Curriculum SIG, Molecular Biology and Genomics SIG, Complementary and Alternative Medicine SIG

WSCC, Room 608/609, Level Six

10:35 a.m.
Hitting a Home Run: Collaborative Curriculum Design
Gail Y. Hendler, Head, Information and Access Services, Hirsh Health Sciences Library; **Amy R. Lapidow,** Information Services/Circulation Librarian, Hirsh Health Sciences Library; **Karina Meiri,** Professor, Anatomy Department, School of Medicine; Tufts University, Boston, MA
Objectives: This paper chronicles how our library changed an existing information mastery (IM) curriculum begun in 2008 to better meet the learning objectives of a pre-thesis master's course. Collaboration with the medical school course director and an innovative librarian approach to curriculum design resulted in students gaining the research skills needed to support the scientific argument required for the practice writing assignments.
Methods: Initially, the seven IM modules lived alongside but separate from the writing section of the course. To fully integrate the library skills and writing segments, we revised the curriculum to reinforce the skills taught in the one-hour library modules. We changed the game by creating assignments that required students apply the information skills to the writing homework. Librarians created specialized resource guides, Toolbelts, for each module and placed them within the course page on the course management system (CMS). In this way, all course information was centrally located in a place students and faculty "lived." Librarians evaluated the bibliography and research methods for each assignment. Medical school faculty reviewed the writing. Submission and grading formerly accomplished via email to several instructors was moved to the assignment utility within the CMS to further integrate both sections of the course.
Results: Learners gained hands-on practice in locating resources and references to support the writing assignment arguments. Overall course evaluation and module-specific feedback consistently communicated a high level of satisfaction with the workshops and with the CMS instructional support. Based upon the success of the information mastery curriculum future plans to expand the course are being discussed
Conclusions:
• Building module-specific toolkits on the courseware system to support library skills training facilitated access to the library resources and increased student satisfaction by supporting learning where learners live.
• Building a strong, collaborative relationship between the librarian and medical school course directors enabled the curriculum redesign to successfully meet the course goals
• Changing the game from librarian-centered to learner-centered instruction, designed to meet students' needs improved the research outcomes, better supported the writing assignments, enhanced librarian profiles with students and faculty, and provided fundamental skills meant to be routinely employed for the program and beyond.

10:55 a.m.
Transcending Personal Stats: Leveraging Peer Review to Improve Teaching and Redesign Interactive Class Content
James Brucker, Instructional Design Librarian; **Stephanie C. Kerns,** Head, Education and Outreach, and Curriculum Librarian; **Linda O'Dwyer,** Communications Coordinator and Education Librarian; **Pamela Shaw,** Biosciences and Bioinformatics Librarian; Galter Health Sciences Library, Northwestern University, Chicago, IL
Objectives: Traditional learner-generated class evaluations often present a subjective, general assessment that is not specific enough to enable instructors to improve pedagogical facets or deconstruct a course's overall instructional design. The education librarians at this academic health sciences library coordinated a classroom-embedded, peer-review process, focusing on the actual learner experience, then creating and measuring specific instructional goals.

Methods: The library first researched, created, and piloted a customized assessment rubric. This tool focuses on instructional style, communication, learner interactivity, and general course content and design. Each category is much more detailed and specific than in a typical class evaluation, as the librarian reviewers have more time to focus on assessment. A peer-review leader then organized each session, corresponding with classes that are frequently taught, and a group discussion and recap followed each review. Each librarian set several personal instructional goals. The group analyzed the overall framework of each class, noting opportunities for interactivity and content consolidation, then restructured classes to make them more engaging. A follow-up peer review for the same class, taught by the same instructor on a future date, directly measured the progress of these specific goals and modifications, all graded against the same rubric.
Results and Conclusions: This tool was originally intended as a simple way to hone instructional and presentational skills. In general, the librarians already proved adept at such basic communication, so the peer-review process developed in accordance with the needs of particular classes. At a basic level, some structural components of instruction were addressed, and most instructional goals defined in the first round of peer reviewing were accomplished, as measured during a subsequent round. One class was completely restructured and expanded, and the peer review proved that certain deficiencies had been remedied. The tool proved flexible enough to apply to both large-scale and focused goals, and retaining the same rubric across subsequent assessments can ensure that particular enhancements do not negatively impact other, otherwise successful aspects of a given class. Outside of the challenge of accommodating several individual librarian schedules for every peer-review session, this proved to be a sustainable assessment paradigm. It is not a replacement for other, user-centric modes of assessment, though, and should be included as a component of a larger, comprehensive effort.

11:15 a.m.
Bringing New Methods into Library Instruction: A Case Study in Team-Based Learning
Brandi Tuttle, Information and Education Services Librarian; **Adrianne Leonardelli,** Research and Education Services Librarian; Medical Center Library & Archives, Duke University, Durham, NC
Objectives: To examine the opportunities and challenges of creating a team-based learning (TBL) session and highlight potential future directions for TBL in library instruction.
Methods: Our doctor of physical therapy (DPT) program recently underwent curricular restructuring, transitioning to TBL. We collaborated with DPT faculty to learn about the TBL process and construct an evidence-based practice literature searching class, which included an online tutorial, readiness assessments, and a team application. Prior to the face-to-face session, students completed the tutorial on acquiring the evidence. The in-person session provided an opportunity to assess student comprehension and retention using individual and group readiness assessments as well as a team application. The readiness assessments quizzed students on material covered in the tutorial. The team application presented a case and required student groups to form a clinical question; construct a patient/problem, intervention, comparison, outcome (PICO) search strategy; and search PubMed, PEDro, and Google Scholar for an answer. Faculty took the feedback we provided for each team application and translated that into a score.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

11:35 a.m.
Assessing the FACTTS: An Evidence-Based Medicine and Critical Appraisal Course for Medical Students
David C. Duggar, AHIP, Reference Librarian; **Deidra Woodson,** Metadata and Digitization Librarian; **Kimberly A. Pullen,** Head, Liaison Section Program; **John Cyrus,** Liaison Librarian; **Donna Timm, AHIP,** Head, User Education;Medical Library, Louisiana State University Health Sciences Center–Shreveport; **Jerry McLarty,** Director, Cancer Prevention and Control, Feist-Weiller Cancer Center, Louisiana State University Health Sciences Center–Shreveport; **Mark P. Baggett,** Assistant Systems Librarian, Medical Library, Louisiana State University Health Sciences Center–Shreveport; **Daniel E. Banks,** Academic Affairs Officer, Department of Medicine, San Antonio Military Medical Center, Fort Sam Houston, TX
Objectives: Fourth-year "Academic Clinical Training & Teaching Selective" (FACTTS) is a course on evidence-based medicine (EBM) and critical appraisal. The study's objectives are to determine if the medical students' understanding of EBM and critical appraisal improve as a result of the FACTTS course and to determine if the students benefit more from having two or three sessions of the course.
Methods: FACTTS is co-taught by faculty of the department of medical library science and department of medicine. During three academic calendar years of the FACTTS course covering 2007–2010, students took an eight-question pretest in the first session and took a posttest with the same eight questions in the last session. Out of the eight questions, the majority was single-answer multiple choice, while two were four-part answers, one was matching, and one was ranking. One question addressed the students' current database preferences. The de-identified data was compiled in Google Docs by the study personnel. The data were analyzed using a Wilcoxon paired test in the Statistical Package for the Social Sciences (SPSS) software to determine change in students' knowledge. Results would influence changes to the course format as well as the number of sessions.
Results: Out of 320 students, who attended the FACTTS class, 298 completed a pretest and posttest. Fifteen completed a pretest only, 6 completed a posttest only, and 1 never took any of the tests. The overall score of the pretests and posttest showed a P-value of 0.001, showing that the results of the posttest were significantly better than the pretest. No significant difference was seen between the numbers of class sessions held.
Conclusions: According to the results of this study, fourth-year medical students gain a better understanding of EBM and critical appraisal after attending the FACTTS course taught by faculty from both the medical library and the department of medicine. However, they do not gain any additional benefit from attending a third session. Therefore, the class is now taught in only two sessions. Additionally, changes were made to both the FACTTS and medical school curricula to further stress the importance of biostatistics and critical appraisal concepts.

Federal Libraries Section

Careers in Federal Libraries

Cosponsored by Informationist SIG

WSCC, Room 611, Level Six

10:35 a.m.
Government Hiring and FEDLINK Professional Competencies and the Series 1410 Study
Blane K. Dessy, Executive Director, Federal Library and Information Center Committee (FLICC) and Federal Library and Information Network (FEDLINK), Library of Congress

10:55 a.m.
NLM Associates Program/NLM's Recruiting Initiatives and Succession Planning
Kathel Dunn, Program Coordinator, Associate Fellows Program, National Library of Medicine, Bethesda, MD

11:15 a.m.
Career Opportunities in the Department of Veteran Affairs
Nancy A. Clark, Director, Library Network Office, Department of Veteran Affairs, Dallas, TX

11:35 a.m.
Federal Opportunities for Innovation and Personal Growth
Terrie Wheeler, Chief, Information and Education Services Branch, National Institutes of Health, Bethesda, MD

History of the Health Sciences Section

Hall of Fame: Nursing and Allied Health Information and Scholarship in a League of Their Own

Cosponsored by Nursing and Allied Health Resources Section, Hospital Libraries Section, Dental Section, African American Medical Librarians Alliance SIG

WSCC, Room 606/607, Level Six

10:35 a.m.
Nursing Collections, Corporations, Collaboration: An Historical Interdisciplinary Model
Warren G. Hawkes, AHIP, Director, Library/Records Management, New York State Nurses Association, Latham, NY; **Richard J. Barry, AHIP,** Librarian, Archivist, Records Manager, Library, American Nurses Association, Silver Spring, MD
Objectives: This presentation documents the early evolution of the nursing literature, nursing libraries, and the creation of the original organization (Interagency Council on Tools for Nurses) and its development into a partnership of professional nursing and library organizations to assist nurses to access and utilize information that supports and enhances professional nursing practice.
Methods: An initial literature review was completed to examine and document the evolution of nursing information resources in the United States from approximately 1900. As the literature of the profession evolved, a myriad of approaches grew to provide access. This case study examines the development of a cooperative organization pairing professional nursing and library organizations and its development into a partnership of professional nursing and library organizations to assist nurses to access and utilize information that supports and enhances professional nursing practice. The council has evolved over several decades into the digital era as the current Interagency Council on Information Resources for Nurses with publication of its 26th edition of Essential Nursing Resources (now in a digital format) and its efforts to advance research on the nurses' information literacy skills.

10:55 a.m.
The Evolution of Nursing Journals and Indexing
Margaret (Peg) Allen, FMLA, Consultant, Health Knowledge Consultants, Stratford, WI; **Pamela Sherwill-Navarro, AHIP,** Librarian and Instructor, Library, Remington College of Nursing, Lake Mary, FL; **Joy Kennedy,** Librarian, Health Resource Library, Northwest Community Hospital, Arlington Heights, IL; **Holly Hubenschmidt, AHIP,** Head, Instruction and Liaison Services, Emerson Library, Webster University, St. Louis, MO
Objectives: Goals:
• To highlight the growth of scholarly nursing journals from the nineteenth century to the present, as nursing evolved from physician handmaidens to leaders of the health care team.
• To compare and contrast indexing efforts where nurses worked with librarians to provide comprehensive access to the literature of nursing.
Methods: Beginning with the first national studies of nursing education, nurses have been studied as well as the curriculum and teaching methods. These reports will be analyzed, along with standards and published research on nursing journals and libraries. Research leading to the 2012 Selected List of Nursing Journals, along with index coverage data from the mapping the literature of nursing studies, will form the basis for quantifying the rapid growth of nursing journals that began as nursing research mushroomed following World War II. As technology evolves, recent efforts are augmenting the traditional indexes to cover more formats, even unpublished research. Do we still need licensed nursing subject indexes to capture the best evidence for nursing practice?
Results: The Nursing and Allied Health Resources Section (NAHRS) 2012 Selected List of Nursing Journals includes 212 current scholarly nursing journals, with descriptive data. Subject index coverage is noted for 7 indexes, as well as 3 sources for cited references. The final 12 columns cover availability of full text in vendor collections as well as the public web. This list can be accessed at www.nahrs.mlanet.org/home/images/activity/nahrs2012selectedlistnursing.pdf. Other resources consulted include the NAHRS Master List of Journals, which includes ceased titles and those cited in the NAHRS mapping studies, 2011 to date, results of the NAHRS/International Academy of Nursing Editors survey of nursing editors, and content analysis (research, evidence-based practice, and continuing education) for titles in the selected list.
Conclusions: The growth in scholarly nursing publishing is closely aligned with the development of nursing specialties and professional organizations. With the 2011 Institute of Medicine future of nursing report calling for more interdisciplinary practice, will we need to broaden the range of journals available for nursing education and practice?

11:15 a.m.
Aiming for the Infield or the Outfield: Which Field Gives Nursing Research the Most Runs?
Thane Chambers, Research Librarian, John W. Scott Health Sciences Library, University of Alberta–Edmonton, Canada
Objectives: Often interdisciplinary, nursing research influences and is influenced by many subject areas including: medicine, sociology, administration, and health policy. Nursing research journals are obvious places to disseminate study findings. But more impact and influence may occur by publishing study findings outside of nursing research. This citation analysis explores whether publishing in nursing or non-nursing journals provides a bigger hit.
Methods: The Web of Science database was used to retrieve 77,873 citations authored by nursing researchers. Citations were divided into 2 categories based on each journal's focus: nursing or non-nursing. Citation data will be analyzed to reveal whether publications from nursing or non-nursing journals receive more citations. Highly cited articles from each set will be analyzed to explore if common traits exist such as coauthors, research design, and journal impact factor. Citations of these high-impact articles will be explored to determine if more citations come from inside or outside nursing. Findings from this work will influence a nursing faculty publication strategy at a major university. This will be one outcome from a program using research findings and data generated from an embedded librarian. This data will assist nursing librarians to coach nursing researchers who are aiming for impactful and influential research.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

11:35 a.m.
Who's on First? Mapping the Literature of Addictions Treatment
Paul M. Blobaum, Health and Human Services Librarian, Governors State University Library, Governors State University, Park Forest, IL
Objectives: Collection development research activities provide health sciences librarians opportunities for outreach and establish new relationships. This study moves the Nursing and Allied Health Resources Section (NAHRS) "Mapping the Literature of Allied Health" project beyond investigations in traditional allied health fields to identify core addictions journals. Recognition of addiction as a disease of the brain points to the important role librarians play in disseminating research.
Methods: Citations from three source addictions journals were documented and analyzed for the years 2008, 2009, and 2010 using the NAHRS methodology, "Mapping the Literature of Allied Health Project Protocol" of 2010. Addictions studies faculty were surveyed by email and face to face to assist in identifying the three source journals. Bradford's Law of Scattering was applied to analyze the productivity of cited journals. An analysis of indexing availability was performed on core journals. Other cited reference types of book, Internet, and government document were analyzed.
Results: Over 40,000 citations were studied. Journals were the most frequently cited literature, with 10 journals providing one-third of the cited journal references. Two thousand, six hundred sixty-two unique journals were cited. Ten "Zone 1" journals were cited as frequently as 80 "Zone 2"journals. MEDLINE/PubMed emerges as the single most important index to this field.
Conclusions: This study expands the NAHRS journal mapping studies into new a new area of inquiry into subject areas on the perimeter of traditional allied health discipline, and is the latest contribution to the thirty-four NAHRS mapping project studies using this protocol published as of January 2012. Results provide quantitative evidence of a core set of English language scholarly journals in the addictions treatment field and can be used by librarians to make collection development decisions. Results also bring new understanding of addictions treatment literature and key research databases to educators and professionals in the field.

Medical Library Education Section

New Voices: Let's Hear It from the Rookie Line-up

Cosponsored by New Members SIG, Research Section

WSCC, Room 604, Level Six

10:35 a.m.
Pitching Data Services to Translational Researchers: A Pilot Project
Lisa Federer, AHIP, Health and Life Sciences Librarian, Louise M. Darling Biomedical Library, University of California–Los Angeles
Objectives: This paper reports on a pilot project to assess the data needs of translational researchers in order to explore how librarians can leverage their expertise to provide data services that further the research mission of the institution, yet are sustainable in a climate of limited funding and short staffing.
Methods: Translational researchers at a major research university who had previously participated in focus groups on the data needs of translational researchers were recruited for participation in the pilot project. Teams of librarians (one public service and one cataloging) will meet with the researchers individually to investigate their data needs and propose a small-scale project that they could complete to assist the researchers with their data. Possible projects include creating or adapting metadata, assisting with data management plans, facilitating deposit of data in shared data repositories, and other data-related services. After the completion of the project, the researchers will complete a feedback questionnaire to assess the usefulness of the project. The project will also investigate the feasibility of adding data services to the library's permanent offerings.
Results: Initial results of this ongoing project suggest that librarians' skills and knowledge—particularly related to metadata, data practices, and preservation—make them valuable partners for translational researchers who practice data-driven science. However, since librarians are taking on these roles in addition to their existing workload, turnaround time for projects may be longer than optimal, particularly in light of the fast-paced nature of translational research. Where this is not possible, librarians can still be valuable to researchers by providing data consultations, instruction in data best practices, and smaller-scale metadata projects.
Conclusions: Offering data services to translational researchers provides the library the opportunity to create new partnerships and meaningfully support the university's research mission. At

present, the library can successfully handle individual requests for assistance but may need to consider hiring or reassigning staff if efforts at providing larger-scale data services are to be successful and sustainable.

10:51 a.m.
Implementing and Evaluating Cancer Consumer Health Programming
Martha E. Meacham, MLIS/MA Student, Library and Information Science and History, Simmons College, Pembroke, NH
Objectives: This paper proposes to examine the implementation and effectiveness of consumer health programming developed for cancer patients and caretakers. Programs focused on outreach, traditional health literacy, and instruction about finding and evaluating medical information on the Internet.
Methods: Three programs for patients and caregivers were developed and implemented at a large, urban cancer treatment center. The first program, "Dana-Farber Reads," was a general literacy and education program, formatted as discussion about cancer-related readings that had been freely distributed. The second program, "Beyond Google," was designed to improve skills related to searching for and understanding information on the Internet. The third program, "Quick Reads," was aimed at low literacy populations; providing information in an easily accessible, understandable format. This paper is primarily a case study of how these programs were developed, implemented, and evaluated and the overall program outcomes. Data to determine results were gathered using surveys and interviews. The outcomes measured were participant learning, satisfaction, and suggestions. Finally, the overall success was determined, and recommendations for future continuation or changes to programming are suggested.
Results: All programs have been considered successful to some degree and have been positively received by patients, caretakers, and other staff. Some programs, or aspects of programming, were found to be more useful or well received by participants. These features are noted and implemented in other areas where applicable. The programs and features that were less well received or recognized, mainly the "Quick Reads" intuitive, are being reworked and reevaluated to determine how to make this program, and others, more popular and useful.
Conclusions: While all the programs have proved popular and useful in education and outreach to some degree, suggestions from participants and program evaluation have presented opportunities for improvement, as well as considerations for future programming development and implementation.

11:07 a.m.
A New Playing Field: A Librarian's Experiences Developing the Role of a Digital Information Gallery
April J. Schweikhard, Medical Librarian, Schusterman Library, University of Oklahoma–Tulsa
Objectives: To explore approaches used to develop a unique program for a newly built digital arts and information gallery. The gallery is designed to foster multidisciplinary collaboration between academic and health sciences programs, to facilitate community involvement, and to increase library visibility. A recent library school graduate was given the responsibility to develop and coordinate gallery exhibits and events.
Methods: In June, 2011, the University of Oklahoma-Tulsa Schusterman Library opened a new free-standing facility to house the library. The building includes a 900-square-foot gallery space equipped with 5 flat-screen monitors for digital projection and multimedia presentations. Within the first 3 months after opening, the library hired a medical librarian to develop and coordinate physical and digital exhibits hosted in the gallery. The librarian is a new graduate of a master's level library and information studies degree program. This paper describes the development of the role of this new space through examples of completed and future exhibits and events hosted in the gallery. Specific challenges—including effective use of space, procurement of funding, and project management, along with assessment methods being considered to ensure that the gallery contributes to the library's and university's mission—are also discussed.
Results: The digital arts and information gallery is contributing to the library and university's missions of community engagement. Gallery exhibits and events have fostered interdisciplinary participation from health sciences and academic programs; community partners have been identified as collaborators and funding resources; and the gallery space is being used in unique and interesting ways as a venue for campus events. Each exhibit and event offers the new librarian additional opportunities to further develop project management and marketing skills. The greatest challenge continues to be employing assessment methods for the measurement of exhibit success.
Conclusions: The Schusterman Library's digital arts and information gallery will continue to host and develop relevant exhibits as a means to engage its university and community populations. The library will continue to test various assessment methods to ensure that exhibits contribute to the overall mission of the University of Oklahoma-Tulsa.

11:23 a.m.
A Rookie's Perspective: The Relationship Between Activities in Professional Organizations and Professional Competencies for Health Sciences Librarians
Phill Jo, Graduate Student, Reference and Instructional Services, Robert M. Bird Library, University of Oklahoma Health Sciences Center–Oklahoma City
Objectives: This paper seeks to find out how active involvement in national, regional, and local organizations impacts new librarians and students and fosters the development of more competent health sciences librarians. In addition, the major benefits and challenges of professional participation for both experienced librarians and rookies in the field will be examined.
Methods: This study utilizes a convenience sampling method, surveying health sciences librarians and students in library and information studies. The survey contains open-ended questions addressing the (1) level of involvement in professional organizations, (2) number of organizations they are involved in, (3) purposes of involvement, (4) primary activities they participate in, (5) benefits and challenges of professional activity, and (6) recommendations for new librarians, students, or those wishing to increase their professional activities. For respondents not involved in any professional organizations, the questions focus on the reasons why they abstained. The survey results are analyzed in relation to the *Competencies for Lifelong Learning and Professional Success: The Educational Policy Statement of the Medical Library Association.* Accessibility, availability, and usefulness of educational resources provided by MLA and the National Network of Libraries of Medicine (NN/LM) are also discussed.

Results: The survey results, along with one-on-one interviews, reveal that experienced medical librarians benefit from professional involvement by participating in various activities. Networking and sharing information with other librarians and institutions are crucial resources that can be developed through associations. Diverse involvements in professional organizations support health sciences librarians in becoming lifetime learners. Not surprisingly, students have little knowledge about the diverse learning opportunities professional organizations provide. They often do not recognize the diversity of professional organizations, activities, and the importance of becoming involved. Even after initial participation, students do not feel a strong connection with organizations or personal commitment for continuous involvement.
Conclusions: The individual stories of respondents demonstrate that there should be more systematic strategies to encourage new professionals and students to become actively involved in professional associations. Preliminary analysis indicates that the strong connections and personal commitment gained through professional activity are correlated with professional competencies and successful practice as health sciences librarians.

11:39 a.m.
Move up to the Big Leagues with Data Visualization Skills
David M. Howard, Graduate Student and Research Assistant; **Valerie L. Howard,** Student; Library and Information Science, University of North Texas–Denton
Objectives: To identify the skills and competencies needed to facilitate the creation of data visualization (DV). To compare and contrast DV skills and competencies with MLA's *Competencies for Lifelong Learning and Professional Success.*
Methods: A search of current DV job announcements on job search sites including Monster.com, SimplyHired.com, Indeed.com, CareerBuilder.com, ALAjoblist.org, LISjobs.com, USAjobs.gov, and The Chronicle of Higher Education job list was conducted. Content analysis of the skills listed in the announcements was completed. The skills identified were compared and contrasted with MLA's *Competencies for Lifelong Learning and Professional Success.*
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

Pharmacy and Drug Information Section

Building the All Star Team: Librarians' Role in Enabling Interprofessional Education

Cosponsored by Dental Section, Complementary and Alternative Medicine SIG

WSCC, Room 612, Level Six

10:35 a.m.
Batter's up: Librarians Score as Campus Leaders of Interprofessional Education
Jean P. Shipman, AHIP, FMLA, Director; **Joan M. Stoddart, AHIP,** Deputy Director; **Jeanne M. LeBer, AHIP,** Associate Director, Education and Research; **Nancy T. Lombardo,** Associate Director, Information Technology; **Alice Weber, AHIP,** InterProfessional Education Librarian; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City
Objectives: Support a variety of opportunities in different contexts for health sciences students to learn as interprofessional teams in order to prepare them for real life practice.
Methods: With the library as the convener, several teams of faculty including curriculum coordinators from the health sciences schools were charged, including an Interprofessional Education Team (IPE), a clinical training team, and several health literacy teams. Two fall retreats were held to assess existing interprofessional education offerings and to identify additional collaborations. A health literacy white paper was created and presented to the deans and senior administration who granted approval for a basic training requirement for every student. An IPE student group is assisted with planning a fall 2011 informational conference and with developing new programs.
Results: The fall retreats were helpful in reinvigorating the interest in IPE. Faculty have reworked the MLA Health Literacy electronic presentation to fit local interests. Students continue to interview standardized patients to share their experiences with their professional peers. A new simulation center provides opportunities for training true clinical skills across disciplines. Scenarios are being restructured to emphasize health literacy and cultural competency. A real hospital clinical experience centering around patient discharges is being planned.
Conclusions: To date, the collective efforts are being appreciated as the university wants to be a national leader in IPE. The library is seen as an excellent convener of key stakeholders and a neutral party. Key issues have included lack of meeting time, challenges of coordinating student schedules, and availability of joint facilities.

10:55 a.m.
Interleague Play: Campus Leadership through Interprofessional Education
Emily Brennan, Medical Librarian; **Amy Chatfield,** Information Services Librarian; **Eileen Eandi,** Associate Director, Educational and Research Services Division; Norris Medical Library, University of Southern California–Los Angeles
Objectives: In fall 2010, the library capitalized on its role as an impartial center of campus academic activity to bring together faculty from the schools of medicine and pharmacy to explore opportunities for interprofessional education (IPE). One year later, librarians chair the university Health Sciences IPE Committee with twenty-seven faculty and five student representatives from six health sciences disciplines.
Methods: Aware of the lack of collaboration and coordination between the health sciences disciplines, the library hosted a meeting of faculty from the schools of medicine and pharmacy. This resulted in the creation of the Health Sciences IPE Committee, with a librarian as its chair. Committee membership expanded and currently represents medicine, pharmacy, occupational therapy, physical therapy, physician assistants, and dentistry. Librarians created an IPE website for committee business and scholarly information. The librarian sets the agenda for and leads meetings. Committee agenda items have included competencies, evaluation tools, and pilot projects. Accomplishments have included the committee chair being an invited speaker at a campus-wide IPE event and providing research support for a funded grant proposal. The library is credited with facilitating the university's IPE efforts and has enhanced its leadership standing in the health sciences community.

11:15 a.m.
Theory and Practice à la Yogi Berra: The Interprofessional Education of Medical and Pharmacy Students in Evidence-Based Medicine
Heather McEwen, Reference Librarian, Oliver Ocasek Regional Information Center; **Michelle Cudnik,** Associate Professor, Department of Pharmacy Practice and Department of Internal Medicine, College of Medicine; **Lisa N. Weiss,** Assistant Professor, Family Medicine; **Rienne Johnson,** Reference Librarian, Oliver Ocasek Regional Medical Information Center; **Beth Layton, AHIP,** Deputy Director, Oliver Ocasek Regional Medical Information Center; Northeast Ohio Medical University–Rootstown
Objectives: First-year medical and pharmacy students learned about evidence-based medicine through two interprofessional courses. Course faculty and small group leaders included librarians, pharmacists, physicians, and behavioral and basic scientists. This interprofessional approach allowed students to learn how many disciplines can contribute to health care teams.
Methods: Two, integrated evidence-based medicine courses were taken by first-year medical and pharmacy students. The "Evidence Based Medicine I" course focused on finding clinical information, understand biostatistics and learning about clinical research design. In the "Evidence Based Medicine II" course, students apply information literacy and statistical knowledge from the previous course. Literature evaluation is the focus of the lectures and assignments for the second course. Student assignments included two integrated, small group journal club presentations and an individual literature review. Medical and pharmacy students worked together in small group assignments and observed multidisciplinary faculty members working together in the course. Librarians actively participated in the curricular decisions and course management, as course faculty, and provided library support for the courses. Students evaluated the courses and the faculty members.
Results: Medical and pharmacy students worked together in in-class activities and small group assignments. Librarians gave lectures, led some interactive activities, provided one-on-one training, created assignments, and organized selected journal club articles. Librarians collaborated with faculty members of all disciplines. Students learned from faculty members of multiple disciplines. Student and faculty feedback is utilized in future curricular development.
Conclusions: Because of the team-based nature of medicine today, the Northeast Ohio Medical University believes that the interprofessional education of medical and pharmacy students in a team-based format will lead to improved patient care. In the evidence-based medicine courses, medical and pharmacy students learn to work together. Interprofessional faculty team work also models behavior that we hope our students adopt as health care providers. The library also provides information resources and support for those resources. Library faculty take an active role in the as faculty members in the education of future health care providers.

11:35 a.m.
From Utility Player to Team Captain: Health Sciences Librarians Facilitating Interprofessional Education
Andre J. Nault, Head and Associate Librarian, Veterinary Medical Library, University of Minnesota–St Paul; **James Beattie Jr.,** Medical School Liaison, Health Sciences Libraries, University of Minnesota–Minneapolis
Objectives: This paper will describe the unique opportunity health sciences librarians serving a larger academic health center in the Midwest have taken to fully participate in the facilitation of interprofessional education of health professions students. Our objective therefore, will be to share best practices and lessons learned from our journey from the bench to the field as coaches
Methods: Deans of an academic health center schools—responding to demands of the workplace and logic of health professions students learning with, from, and about each other—defined a set of common ground topics to be addressed interprofessionally. This led to the creation of a course for all health professions students, the "Foundations of Interprofessional Communication and Collaboration" (FIPCC). Approximately 900 first-year students, from 6 schools of the allied health programs, participate in the FIPCC course. Students are exposed to a blended learning experience of online resources and face-to-face, small group sessions facilitated by faculty and practitioners across the health care spectrum. The curriculum addresses the 4 competency domains for interprofessional practice endorsed by the Interprofessional Education Collaborative, a coalition of accrediting bodies: (1) values/ethics of practice, (2) roles/responsibilities, (3) interprofessional communication, and (4) teams and teamwork.
Results: The Associate Deans for Education Council, a body that has had librarian participation since 2006, directed the shaping of the FIPCC course from idea to implementation. As a result, our liaison librarian for the college of veterinary medicine was invited to be a small group facilitator for the first course offering in 2010 and participated in the 2011 course. Our liaison librarian for the medical school volunteered to be a facilitator of the 2011 course. These opportunities occurred through our visibility in our respective schools and our effectiveness as liaisons, and allowed us to flex our abilities as group.
Conclusions: Health sciences librarians are uniquely positioned to facilitate interprofessional education for health profession students in the competency domains for collaborative practice. We have an understanding of the curriculum across the professions, are grounded in a profession where collaboration is fundamental, and adhere to ethical standards of practice. Therefore, health sciences librarians engaging in interprofessional education is a natural fit and one that advances our case for being regarded as colleagues by other health professionals.

Public Health/Health Administration Section

Going the Distance: Keeping Your Global Health Projects Alive

Cosponsored by International Cooperation Section, Relevant Issues Section

WSCC, Room 613/614, Level Six

10:35 a.m.
Expanding the Library's Commitment to Global Health Engagement: Process, Outcomes, and Challenges
Mellanye Lackey, Global Public Health Librarian; **Carol Jenkins, AHIP, FMLA,** Library Director; **Jill Mayer, AHIP,** Associate Network Director, North Carolina Area Health Education Center; **Kathleen McGraw,** Assistant Department Head, User Services, and Information Services Coordinator; **Susan Swogger,** Collections Development Librarian; Health Sciences Library, University of North Carolina–Chapel Hill

Objectives: When global engagement was named an official mission of the university, the health affairs schools and the library responded by clearly articulating and expanding their global health missions. This abstract describes how a large, academic health sciences library established an internal structure and began to expand its support of global health research at its university.
Methods: The library has a long history of successfully supporting global health at our university through outreach, reference, collection development, and hosting of international visitors. To establish a project library in Malawi to support university research increased the scope and depth of the library's global health involvement, the library formed an official library initiative for global engagement. Twenty percent of a librarian's time supports the initiative, a small budget was assigned, and a committee was created to advise and supplement the director's work. Awareness was raised through increased personal contacts with university researchers in global health. The library launched a global health engagement web page and produced a series of videos featuring researchers who strongly support the library's global health efforts. The global librarian teaches a global health emerging technologies class and traveled to Uganda as part of university clinical mission trip.
Results: The library now offers a specific package of services to promote its capacity to support global health. The global health librarian also helped create a network of local librarians and knowledge management professionals active in global health through a un-conference. They now collaborate on shared projects. In order to expand the library's capacity, the engagement committee presented a global health wish list (with dollar amounts included) to the library's advisory board of visitors and plans to focus development efforts on raising money to expand global health library activities.
Conclusions: These activities increased the library's understanding of the information needs of global researchers. We now offer a suite of services to meet our users' needs.

11:01 a.m.
An Initiative to Include Literature Searching Skills in the Curriculum in a Developing Country, with an Across the Country Training Initiative
Vasumathi Sriganesh, Chief Executive Officer; **Parvati Iyer,** Director, Projects; **Dipti Suvarna,** Information Manager; QMed Knowledge Foundation, Mumbai, India
Objectives: To determine if reaching out literature searching skills to large populations of health sciences students and professionals in a developing country will make a difference in ensuring that such skills are included in the curriculum and are recognized as the building blocks and imperative components for any publication. To explore how such a program can be funded.
Methods: Setting and Population: Health sciences students, faculty, and professionals in a developing country using PubMed regularly or occasionally; this population does not get routine training in literature searching. Methods: Participants from different parts of the country were given a half-day training program on searching PubMed, in their town or city. Almost all participants had not had any training earlier. We taught them the scope of PubMed, about a record in PubMed, how to search using fields, Boolean operators and Medical Subject Headings (MeSH), important features like "Saving searches and collections" and Single Citation Matcher, and how to do searches in the absence of a MeSH term for a concept. We included several examples and questions. We asked them to fill a questionnaire for feedback to evaluate their learning and to get their opinion about the need to include such programs in the curriculum.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

11:28 a.m.
The Elsevier Foundation: A Funders' Perspective on Global Health Libraries Grants
Tom Reller, Vice President and Head, Global Corporate Relations, Elsevier; **Lenny Rhine, FMLA,** Coordinator, Librarians without Borders® E-library Training Initiative

Veterinary Medical Libraries Section

Wisdom of Yogi: How We Instruct Our Game

Cosponsored by Institutional Animal Care and Use SIG

WSCC, Room 615/616, Level Six

10:35 a.m.
You Can Observe a Lot Just By Watching: Building a Comprehensive Copyright Program
Rienne Johnson, Reference Librarian; **Kevin A. Caslow,** Reference Image Assistant; **Beth Layton, AHIP,** Deputy Director; Oliver Ocasek Regional Medical Information Center, Northeast Ohio Medical University–Rootstown
Objectives: Two years after the change of campus copyright policy, librarians at an academic institution evaluated the suite of copyright services. Analyzing service statistics determined that faculty, especially off-campus faculty, has not been best served by the program, as education and marketing were minimized at the program's launch. To meet faculty's needs, the program's strategic focus is now copyright education.
Methods: Usage of the copyright suite of services has increased substantially since the program launch in 2010. The copyright and image guides, newly launched in July 2011, are popular guides, but lecture audits do not illustrate understanding of university copyright policy and copyright law. Audits continue to show a lack of knowledge of proper citation formats and permissible use of images. To increase copyright knowledge, the library is increasing education and marketing of library copyright resources with an emphasis on reaching off-campus faculty. Strategies include the usage of email campaigns, seminars, Web 2.0, animated videos, and continued promotion and revision of the library image directory based on faculty need. These strategies will provide faculty the knowledge and ability to utilize the resources provided by the copyright service, which will increase copyright compliance on campus.
Results: Librarians are educating the campus community through the image directory and the Creative Commons license initiative. The library image directory provides education on image use in presentations and citation formats for images, as well as a directory of permissible use image resources. The directory averaged 138 visits per month. Traffic was greatest at the beginning of the semester, averaging 122 visits per month. The second education initiative will introduce Creative Commons to the campus community: a seminar has been scheduled and will be made available online afterwards. Web 2.0 initiatives and a formal marketing

plan will begin shortly.
Conclusions: Typical copyright questions have changed, as questions now focus less on permissible images and more on videos, sound recordings, and more traditional print resources in the classroom. Current service statistics illustrate progress in image copyright compliance on campus, but the slight improvement indicates there is more work to be done to reach off-campus faculty. Traditional outreach and technological innovations have reached more faculty, but continued education for all faculty and a well-developed marketing plan are essential to the program's success.

10:51 a.m.
When You Come to a Fork in the Road, Take It: Experimenting with Collaborative Opportunities
Esther Carrigan, AHIP, Associate Dean and Director, Medical Sciences Library, Texas A&M University–College Station; **Heather K. Moberly, AHIP,** Veterinary Medicine Librarian, William E. Brock Memorial Library, Center for Veterinary Health Sciences, Oklahoma State University–Stillwater; **T. Derek Halling,** Onsite Services Librarian, Medical Sciences Library, Texas A&M University–College Station
Objectives: To leverage unplanned collaborative opportunities arising during a digitization project.
Methods: Two universities in neighboring states received a joint Library Technology Award from the South Central Region of the National Network of Libraries of Medicine (NN/LM SCR). Awarded funding offset costs for scanning the Index Catalogue of Medical and Veterinary Zoology (ICMVZ) to improve patron access and preserve the resource. Project scope included both digitizing and promoting the resulting product. The principal investigators consulted with veterinary library colleagues, reaching a consensus to directly promote this digitized resource to other audiences outside the comfort zone of fellow librarians. Brainstorming sessions identified potential collaborators for both grant development and promotion. Promotion techniques included presenting posters and papers to a variety of audiences including gray literature devotees, technical digitization audiences, those interested in the history and preservation of the medical literature, and parasitology researchers, who were the original targeted end users of this resource.
Results: The initial institutional collaboration yielded varying approaches to website design. Each institution brought different potential collaborators and natural partners into the project. Different audiences enriched and informed the project work flows and results. Parasitologists proved the richest source for resource functionality and enhancements.
Conclusions: Engagement of the potential user community in all project stages from grant writing through technical processing, development, and promotion resulted in diverse, successful collaborations. Several of these collaborations have led to further interactions and enhanced partnerships.

11:07 a.m.
"If the Fans Don't Come out to the Ball Park, You Can't Stop Them" (Yogi Berra): Taking Library Services to the Users
Katherine A. Rickett, Liaison Librarian, Brody School of Medicine, William E. Laupus Health Sciences Library, East Carolina University, Greenville, NC
Objectives: To "rethink" the ways in which we connect with and engage users and provide services. To review our strategies and determine which ones resulted in hits, home runs, or strike outs. To determine how we can capitalize and expand on the hits and learn what lessons we can from the strategies that struck out.
Methods: When the library moved out of the medical school building and added new relief pitchers, uh, liaisons, the line up for providing services to the clinical faculty, residents, and fellows had to change as well. As new strategies were implemented, statistics were kept on the number of classes, training sessions, and searches provided, and the number of reference questions answered. These statistics were later reviewed to determine whether the strategy resulted in hits, home runs, or strike outs. Comments from the fans (anecdotal evidence) were also considered. Strike out strategies were reviewed to determine if changes could be made that would give us a hit, and if not, they were shut out. Hit and home run strategies were reviewed for possible expansion or use in other games.
Results: The strategies resulting in the most hits included attendance at grand rounds and didactic sessions, email offering help to upcoming speakers or updates on library services, and offers to fill in for last minute speaker cancellations. Office hours and librarian-scheduled (non-requested) classes resulted in strikes.
Conclusions: Different departments and disciplines in the medical school have very different cultures. Determining the best way to integrate library services into those cultures requires some trial and error. One constant, however is the observation that the game plan was most successful in programs where the didactic sessions were run by departmental faculty and staff rather than by chief residents who changed each year.

11:23 a.m.
Nobody Goes There Anymore; It's Too Crowded: Redesigning Our Library Visitor Policy
Debra R. Berlanstein, AHIP, Associate Director, Hirsh Health Sciences Library, Tufts University, Boston, MA; **Ryan Harris, AHIP,** Reference and Research Services Librarian, Health Sciences and Human Services Library, University of Maryland–Baltimore
Objectives: As a public health sciences library in an urban area, we have always had an open visitor policy. When managing the public computer area created problems for reference staff and neighboring patrons, we developed a multistep, thoughtful process that included a series of staff discussions and consultation with university counsel and library administrators to develop a positive solution.
Methods: It was clear to the reference staff that the existing policy stating that seven visitor computers in the reference area were to be used for health-related research was ineffective. Staff was spending too much time managing the visitor computer area. Additionally, students complained that the nearby noise and disruptive behavior was negatively impacting the library environment. There was also a need for more student computers. In response, we developed a multistep, thoughtful process that included (1) a series of discussions with reference department members to isolate specific issues and develop policy changes, (2) consultation with library administrators and university counsel to be certain the new policies would comply with the library and the university missions, (3) establishment of a policy that was parallel with the other campus library, and (4) careful rollout with clearly posted announcements and buy-in from university police.

Results: The number of visitor computers was reduced from seven to two and were relocated closer to the reference desk. Users are now allowed one thirty-minute session per day. Any visitor or any student from another university expressing a need to do research is logged onto to a student computer by the reference staff to allow them unlimited computer time. The rollout went very smoothly, with only a very small number of complaints from visitors. The new policy is now in line with the other campus library, and the remaining five computers are in continual in use by students and faculty.
Conclusions: Balancing the library's combined mission to provide access to health information to the community and offering our students an atmosphere conducive to effective study presented a significant challenge. When it was clear that policies needed to be changed, thoughtful and frank staff discussion was the first step in developing a strategy. Once a direction became clear, working closely with university counsel and university police provided a roadmap for designing and instituting the new policy. Since then, the academic atmosphere has been restored, more computers are available, and community members are still receiving computer access and outstanding reference service.

11:39 a.m.
Improving Our Reference Desk Management and Training or I Wish I Had an Answer to that because I'm Tired of Answering that Question (Yogi Berra)
Kelly Thormodson, Head, Health Sciences Education and Outreach; **W. Shane Wallace, AHIP,** Emerging Technologies Librarian; Hardin Library for the Health Sciences, University of Iowa–Iowa City
Objectives: To improve our reference desk management by creating a system that reliably trains new staff members, supports effective communication amongst all members of the desk staff, creates a more consistent organizational system for administrators, and provides a robust support infrastructure for delivery of service to our patrons.
Methods: The setting is an academic health sciences library serving 5 health sciences colleges, a 734-bed research-and-teaching hospital with over 700 residents, and a professional and general student population over 30,000. The reference desk staff—which includes 5 library assistants, 7 librarians, and at least 4–6 students of the graduate program of the school of library and information science—staff the desk approximately 105 hours per week. In the fall of 2010, discussions began on creating a new reference desk site to help staff provide better service to patrons and each other. The collaborative SharePoint site specifically designed for the reference desk staff that includes a knowledgebase of information (both popular and esoteric), desk shift log, announcement and alert function, statistics-tracking system, and desk shift trade board was implemented in February 2011.
Results: It has been clearly demonstrated that our new reference desk web tool has been well received by our staff. Verbal and written comments show a desire to make the best use of the tool. Communication amongst the team members has been more effective.
Conclusions: It is often difficult to quantify the value of any given tool that is used at the reference desk, but it is clear that the primary resource used by our staff is the reference web site. Moving from a fragmented and complex model to a more unified and simple one appears to be a shift toward the removal of obstacles between patrons and proper service. We expect to continue to refine and revise the tool in an ongoing process in order to meet the needs of our patrons and staff.

Section Programs 3

Monday, May 21, 2:00 p.m.–3:30 p.m.

2012 National Program Committee (General Topic)

Spring Training: Education and Instruction

Cosponsored by Libraries in Curriculum SIG

WSCC, Room 608/609, Level Six

2:05 p.m.
Pitch the Ball or Lose the Ground: Reinventing a Year Three Orientation Program Using Multiple Learning Techniques
Wendy Wu, Information Services Librarian; **La Ventra Ellis-Danquah,** Coordinator, Liaison Services and Education Services; Shiffman Medical Library, Wayne State University, Detroit, MI
Objectives: The abundance of resources accessible via the Internet and changing dynamics of librarian-patron relations is increasingly challenging librarians to change the game in order to sustain our role as educators in medical education. Librarians changed a less interactive orientation program into an informative, active-learning program, utilizing multiple learning techniques that introduced students to key information literacy skills.
Methods: Librarians examined several semesters of student evaluations, which led to employing an active-learning approach to retain students' attention, improve learning transfer, and increase the use of library resources. Using LibGuides and social media the revised orientation effectively incorporated a Year-3 Timesaver website, which includes core library resources, a YouTube library training channel, and presentation videos created by the students during the orientation. The student learning activities served to (1) provide guidelines for creating student presentations and (2) highlight library resources for clinical support. Implementing teaching strategies shifted students from passive receivers of information to active learners. Collectively students studied and presented on how and what information could be found in a given resource and how to apply the information in a clinical scenario. Librarians facilitated discussions, provided relative feedback, and elaborated further on the most effective use of clinical resources.
Conclusions: The use of library resources had been increased dramatically after the orientation according to the LibGuides statistics. The evaluation feedbacks from the students were positive and helpful. Librarians will continue using active-learning techniques and providing more options to accommodate different learning styles for future orientation.

2:21 p.m.
Training Library School Student Workers for the Medical Major Leagues
Michelle L. Zafron, Coordinator, Reference Services, and Associate Librarian, Health Sciences Library, University at Buffalo, Buffalo, NY
Objectives: It is not uncommon for libraries to supplement their workforces with library school students. For those who lack a health sciences background, medical reference can be a challenging specialty, and libraries may hesitate to rely on students. This paper describes how an academic health sciences library successfully trains its library student workers, many of whom have pursued medical librarianship postgraduation.
Methods: An academic health sciences library hires library school students to help staff its reference desk and assist in staff projects. As these students most often lack a medical background, they require substantial training. Students undergo an intensive training period comprising individual sessions on medical databases such as MEDLINE, CINAHL, and EMBASE. As the students are new to the librarianship, they also receive departmental and subject area orientations. The university's course management system is used for hosting training documents and exercises. Students complete assignments that reinforce subject matter and help the training coordinator evaluate their progress. They shadow librarians and are in turn shadowed before they are entrusted with solo reference shifts. Librarians provide considerable mentoring post-training, which often results in some students opting for careers in medical librarianship. This paper discusses the advantages and challenges of this program.
Results and Conclusions: Relying on library school students to help staff the reference desk can be an economical solution. It is not without its drawbacks. Training requires a substantial investment of staff time with each hire. Students should be assessed formally and informally throughout their tenure as employees. Although the staff commitment is not small, the program has been largely successful. As a side benefit, it has resulted in many of the students seeking careers in medical librarianship, thus contributing to the profession.

2:37 p.m.
Taking the Library to the Bedside: Integrating Association of College and Research Libraries' Information Literacy Standards into the Simulation Lab
Jan O. Rice, AHIP, Reference and Instruction Librarian and Professor; **Jodi A. Nelson,** Assistant Professor, Center for Excellence in Clinical Simulation; BryanLGH College of Health Sciences, Lincoln, NE
Description: This paper examines the integration of Association of College and Research Libraries (ACRL) information literacy (IL) standards into a simulation laboratory geriatric nursing scenario for students at the BryanLGH College of Health Sciences in Lincoln, NE. The involvement of a medical librarian in simulated clinical training helps students understand how library and credible web resources can strengthen evidence-based decision making in the clinical environment. The BryanLGH College of Health Sciences has adopted a tiered approach to integrating ACRL IL standards throughout the bachelor degree programs of the college, targeting two courses per level to receive IL instruction appropriate to the ACRL competencies. "Nursing Care I" is one of the sophomore-level courses selected for IL integration. Students complete clinical experiences in the medical center and in the college's state-of-the-art simulation lab. One week per semester, students spend one day working with a simulated geriatric patient scenario, rotating through roles as "primary nurse," "care planning nurse," and "clinical leader." A librarian works with the "clinical leaders," encouraging them to ask questions and guiding them through resources to find evidence-based answers. Evidence found is shared with the "primary nurses" to help direct their care of the simulated patient.

2:53 p.m.
Expanding Our Playbook: Librarians as Course Instructors
Laura E. Abate, Electronic Resources and Instructional Librarian, Himmelfarb Health Sciences Library; **Anne Linton, AHIP,** Director, Himmelfarb Health Sciences Library, School of Medicine and Health Sciences; George Washington University, Washington, DC
Objectives: While librarians have extensive experience in providing individual workshops and focused instructional sessions, they rarely have the opportunity to function as course instructors with primary responsibility for course development, instruction, and student assessment. To broaden their instructional expertise, two librarians sought to become primary instructors for semester-length credit courses.
Methods: Using local contacts, two librarians were invited to teach courses in health informatics: a graduate-level course in a traditional classroom environment and an undergraduate-level course taught via distance education. The librarians drew on their familiarity with health sciences education, environment, and systems; knowledge of technology to support work flows; familiarity with standards and vocabularies; and, understanding of user interfaces and needs assessment. The librarians completed extensive research and reading to further their knowledge in health informatics topics and tried to incorporate principles of adult education and active learning in both classroom and online settings.
Results: While the courses differed greatly, the librarians were able to collaborate by sharing information on resources and readings, instructional strategy, and approaches to student assessment and communication. Librarians bring particular strengths to health informatics instruction, but also face challenges in developing content and activities for a semester-length course as opposed to more traditional workshops and standalone sessions. Due to librarian involvement in teaching health informatics, there has been increased consultation with faculty in the health services management and leadership program and growing involvement in support for e-science and data management.
Conclusions: Health sciences librarians have skills and knowledge sets that are uniquely suited to teaching health informatics. The challenge of teaching a full-semester course can be daunting at times but can also be deeply satisfying. In addition, the library itself can benefit as librarians deepen their subject knowledge, gain a greater understanding of the overall curriculum and educational program, and enhance their teaching skills.

3:09 p.m.
Performance on the Field: From Information Confusion to Skill Acquisition
Sarah K. Morley, AHIP, Clinical Services Librarian; **Ingrid C. Hendrix, AHIP,** Nursing Services Librarian; Health Sciences Library and Informatics Center, University of New Mexico–Albuquerque
Objectives: Using the scholarly communication cycle as a model/framework to teach information literacy, the authors developed a course elective for second- and third-year medical students. This paper describes the development, implementation, and assessment of this elective. Course content and activities will be described in detail as will plans regarding current and future educational offerings.
Methods: An academic health sciences center library serving a school of medicine, college of nursing, college of pharmacy, and 5 allied health programs. Targeted to second- and third-year medical students, this pass/fail elective has been offered annually since 2006 (n=54). There are 5 class sessions, each 1.5 hours in length. Instructors frame the research or information process as broadly as possible in order to delve into the hidden world of information creation and dissemination while at the same time teach specific skills students can use in their daily lives. Interactive discussion, case scenarios with accompanying hands-on activities, clicker questions, and peer learning are employed to engage the students. Pre and post self-assessment questionnaires are administered to gauge student knowledge, while formal course evaluations collected by the school of medicine offer instructors quantitative and qualitative feedback.
Results: Anonymous online evaluations were collected by the office of undergraduate medical education. Evaluation data covering the 5 years this elective was taught shows overall course evaluation range from 4.5 to 5.0 on a Likert scale, with 5 being the highest possible score.
Conclusions: The elective described here took an evolutionary approach to the concept of information: how it is created, discovered, managed, and presented. These skills are vital for students in their clinical and research endeavors and as future health care professionals practicing evidence-based medicine. By identifying opportunities in the curricula of the programs we serve, health sciences librarians demonstrate the importance of their educational role.

Consumer and Patient Health Information Section

Consumer Health Outreach: Taking the Consumer Health Library out of the Library

Cosponsored by Federal Libraries Section; Outreach SIG; Lesbian, Gay, Bisexual, and Transgendered Health Science Librarians SIG; Relevant Issues Section; African American Medical Librarians Alliance SIG

WSCC, Room 612, Level Six

2:05 p.m.
Community Day: Reaching out to First Responders and Community Members
Susan J. Barnes, Assistant Director, National Network of Libraries of Medicine Outreach Evaluation Resource Center, Health Sciences Library, University of Washington–Seattle; **Cynthia Olney,** Evaluation Specialist, Outreach Evaluation Resource Center, National Network of Libraries of Medicine, Roswell, GA; **Angela Ruffin,** Head, National Network of Libraries of Medicine National Network Office, National Library of Medicine, Bethesda, MD; **Lisa Boyd,** Consumer Health Librarian, National Network Office, National Library of Medicine, Bethesda, Maryland
Objectives: The Community Day Pilot Project showcased the role of libraries in community emergency preparedness and fostered relationships among public libraries, hospital libraries, and community organizations involved in first response to emergencies. With support from the National Network of Libraries of Medicine (NN/LM), Community Day preparedness events took place at three sites: Sarasota, FL; Oklahoma City, OK; and Brunswick, ME.

Methods: Local libraries organized events for the general public featuring presentations and exhibits by local and state emergency preparedness and response organizations. Coordinators were all librarians from a local public or health sciences library. Interviews and focused discussions with participants collected qualitative data that provide a picture of activities and outcomes at the three sites as they worked to achieve these project goals:
1. Strengthen and expand health sciences and public library partnerships.
2. Provide access to emergency management information tools and resources.
3. Integrate and involve libraries into their community's emergency preparedness, response, and recovery planning.
4. Promote and publicize the role libraries can play in emergency preparedness.
Results: The public library was showcased as a community resource, and discussions began about additional collaboration. Members of the public learned about local resources by meeting exhibitors, and exhibitors met and networked with each other. Health sciences and public libraries foresaw future collaboration with emergency and community health departments and community-based organizations. Nonlibrarians on event planning committees said they did not realize the asset that public libraries offer to the public in times of disasters. No new public-health sciences library partnerships formed, but all projects enhanced existing partnerships. One project coordinator plans to involve other area hospitals in future events.
Conclusions: By working with planning committee members and exhibitors from other organizations to hold the event, public and health sciences librarians were able to network with representatives from county emergency agencies and emergency-oriented community-based organizations (CBOs). Evaluation findings showed that, in fact, the event met its outcome of raising the profile of libraries among emergency response agencies and CBOs. Also, plans for collaboration among libraries and organizations were initiated through the project. Community Days also served the purpose of introducing the general public to a broad range of community emergency resources.

2:25 p.m.
On the Air! Librarians and Doctors Using the Radio to Communicate with Listeners about Health
Lara Handler, School of Medicine Liaison; **Karen Crowell,** Clinical Information Specialist; **Barbara Rochen Renner,** Library Services Evaluation Specialist and Liaison, Allied Health Sciences; **Christie Silbajoris, AHIP,** Director, NC Health Info; **Jean Blackwell, AHIP,** Information Services Librarian; **Robert Ladd,** Instructional and Media Design Specialist; Health Sciences Library, University of North Carolina–Chapel Hill
Objectives: Librarians partner with producers of a weekly health-oriented radio show hosted by clinicians in the family medicine department. Previously, librarians helped develop the show's interactive website/blog and worked with the show's hosts and producer to improve website usability. Currently, librarians contribute to the show's blog on a weekly basis, supplementing what listeners hear on air with additional high-quality online sources.
Methods: Supplementing weekly show topics, librarians provide consumer health links to reputable websites, supplying additional information and health education to readers of the radio show's website/blog. Librarians provide hosts with resources about communicating health information at a literacy level appropriate for the public. Challenges included communicating with everyone involved, changing blog organization as it expands in scope, and scheduling librarian coverage of shows.
Results: The library is listed as a sponsor on the show's website and is acknowledged on-air weekly. Hosts mention librarian assistance when directing listeners to the website for more information. Website statistics show the blog has been visited over 10,000 times in the last year and that the library sponsorship link on the website/blog sidebar is among the most frequently visited links from the show's site. This partnership increases the public's access to quality health information on the Internet. Feedback from the show's producer and hosts is favorable and the partnership continues. The show is expanding statewide.
Conclusions: This is a unique partnership allowing a health sciences library to collaborate with a radio show to reach the public. The librarians have made valuable contributions in areas including social media, design, knowledge and provision of consumer health resources, and health information literacy.

2:45 p.m.
Out of the Library and into the Mall
Susan H. Mayer, Patient Education Specialist; **Curtis A. Huber,** Health Information Specialist; **Rachel F. Carroll,** Instructor; Barbara Woodward Lips Patient Education Center, Mayo Clinic, Rochester, MN
Objectives: This paper describes a large scale project to develop a health and wellness experience in a retail setting. The authors collaborated with a team to identify displays, technology, and health-related content that would draw visitors and inspire them to engage with staff experts to improve health and well-being.
Methods: A team was identified including a medical librarian, patient education specialists, patient experience design staff, web product managers, designers, project managers, public affairs, and physicians. This paper describes the team's planning process, selection of technology, design process, selection of health information content, and the marketing initiative used in the launch of this new kind of retail space. The space was conceived as a prototype and blends aspects of a museum, a resource center, and a clinical setting. The paper will discuss challenges encountered and lessons learned as well as future considerations.
Results: We learned that visitors to the space did not explore independently as anticipated. The technology platforms did not perform as planned and did not engage visitors as expected. The capabilities and features evolved as they were developed, and the final product did not perform as we had hoped. Once the store opened, the augmented reality features did not receive much use or attention from visitors. The kiosks were not heavily used, either. This may be due to the platforms used or the fact that the health content displayed on the kiosks is commonly available on the Internet, that visitors did not find them enticing, or that visitors preferred face-to-face contact with staff. Many of these features have been changed and the space has been reconfigured in response to these findings.
Conclusions: The prototype approach allowed us to respond to visitors' needs by changing the appearance, adding clinical services and retail products, and shifting focus from technology to communication. In a nearby clinical space, visitors may now schedule heart health assessments, acupuncture, massage, nutri-

tional counseling, sports medicine consultations, and women's health consultations. These services have had a strong positive response. It is expected that these services will be a focus of Mayo's presence at the Mall of America in the future. Interaction with staff members was identified as a positive experience by visitors. Staff have been trained in motivational interviewing techniques and have received health coach certification and training allow them to prepare visitors for the clinical services.

3:05 p.m.
Health Enhancement for Rural Elderly: Improving Health Literacy for Seniors in Eastern Montana
Gail Kouame, Consumer Health Outreach Coordinator, National Network of Libraries of Medicine, Pacific Northwest Region, University of Washington–Seattle; **David Young,** Director, Community Resources Program, Montana State University–Bozeman
Objectives: The goals of the Health Enhancement for Rural Elderly (HERE) project were: (a) to improve the health literacy skills or rural elderly and (b) to build the health literacy capacity of selected rural communities to enable elderly to make well-informed health-related decisions, better manage their own self-care, and enhance their overall health and well-being.
Methods: This project involved four rural Montana communities with populations under 2,000, where elderly accounted for 17.4%-31.3% of the communities' populations. HERE was designed to be community based and hubbed in local senior centers. To enhance the health literacy skills of older residents, the following interventions were used: (a) My Health Companion, (b) hands-on instruction to increase skills for seeking and processing web-based health information, and (c) 5 health information webinars. Building the health literacy infrastructure of the community involved engaging key stakeholders, including libraries.
Results: Sixty-eight individuals with a mean age of 64 were involved in using the My Health Companion tracking system; 41 seniors with a mean age of 67.2 attended the hands-on sessions; and 128 participants viewed the webinars. On a scale of 1 (Not at all useful) to 6 (Extremely useful), those using My Health Companion rated it with a mean score of 4.17. For those participating in the hands-on workshops, on a scale of 1 (Strongly agree) to 10 (Strongly disagree), there was a strong mean score of 1.92 for their "willingness to recommend the workshop to others in the community," but the mean was 5.56 for the "need for follow-up assistance to feel confident enough to search for health information on their own." The added 5 webinars were to reinforce what was taught in the workshops and to motivate seniors to strengthen their skills in using the Internet to seek health information. Of those who viewed the webinars, there was agreement that they would be able to apply the information to their lives, and 93.8% indicated they would recommend the webinars to others.
Conclusions: It is clear that there is a critical need to develop, promote, and improve access to electronic health information at the community level for elderly in small rural communities. There is a wide range of levels of readiness in engaging rural elderly in various interventions to improve their health literacy. Community-based stakeholders are key to marketing, supporting, and implementing practices and interventions to improve health literacy of rural elderly. Although local senior centers appear to be a central point of contact for engaging seniors, a more neutral location such as a public library might increase participation in health literacy workshops and webinars.

Hospital Libraries Section

Knowledge Management: A Whole New Ballgame

Cosponsored by Medical Library Education Section

WSCC, Room 602/603, Level Six

2:05 p.m.
It Takes a Librarian to Rip off the Band-Aid: Replacing Paper Pocket Guides with a Web App
Amy L. Harper, Clinical Librarian, Health Sciences Library, University of Washington–Seattle; **Erik Van Eaton,** Assistant Professor, Department of Surgery, Harborview Medical Center Trauma, and Assistant Medical Director, Surgical Critical Care, University of Washington Medical Center–Seattle
Objectives: During morning rounds in the trauma/surgical intensive care unit (ICU) at an academic medical center, the clinical librarian recognized the need for collecting institution-specific protocols, algorithms, and guidelines into a single access point. These institution-specific items were previously available only in print. The objective of the project was to convert these existing protocols and guidelines into an online, mobile-optimized format.
Methods: In July 2010, we conducted a pilot study to determine clinician attitudes toward the use of guidelines in the trauma/surgical ICU at a level-1 trauma academic medical center. The results of the study indicated that clinician attitudes are generally favorable, but finding these guidelines is problematic, particularly at the point of need. To address this need, we created a mobile application that collects and presents institution-specific protocols and high-impact guidelines in an easily accessible format, putting this vital information in the hands of clinicians at the point of need. We used an open-source content management system to create the platform and provided the content authors of these existent protocols and guidelines a mechanism for publishing and updating their information instantaneously, thereby ensuring that the latest information is used to determine patient care decisions and provide the highest quality of care.
Results: We recruited twelve content authors to contribute protocols and algorithms, and the clinical librarian curated this information housed in the content management system. Content is organized by topics and, in some cases, is tagged with keywords for optimal browsing and searching. The resulting system is accessible to clinicians as a website via a desktop or as a mobile-optimized interface via smartphones and tablets. Statistics indicate that users are accessing the system and that a significant number are repeat visitors.
Conclusions: This pilot indicates that it is feasible to create a content management system for collecting institution-specific clinical protocols and algorithms and presenting them both as a standard website, as well as a mobile-optimized website. Feedback from content authors and users has been positive, but our next steps include usability studies to enhance both sets of users' experience with the site. We would also like to recruit additional content authors and investigate incentives for publishing content on the site. In addition, we intend to establish a formal editorial process and oversight body for managing content.

2:25 p.m.

Development to Implementation: Piloting Knowledge Management (KM) in New England

H. Mark Goldstein, AHIP, Network Coordinator, National Network of Libraries of Medicine, New England Region, Medical School, University of Massachusetts–Shrewsbury

Objectives: In New England, we envision a gradual shift in our profession, from a traditional hospital library setting to a modern health care knowledge services center. As part of its "Knowledge Management (KM) Regional Initiative," the New England Regional office of the National Network of Libraries of Medicine (NN/LM NER) embarked on the next phase of its strategic five-year plan: implementation through pilot sites.

Methods: During the summer of 2010, the development phase of the regional KM initiative was launched following creation of a model template for a health care knowledge services center by the NER's Regional Advisory Council (RAC) Hospital Library Subcommittee. At the MLA chapter meeting, a forum was held to discuss hospital libraries and KM. Acting on feedback from forum participants, a major Boston teaching hospital applied for funding to educate and promote KM throughout the region. Webinars were conducted, and KM concepts introduced. Promotion culminated in a one-day "KM Day" event, held in March 2011. The event was an all-day workshop, consisting of part lecture, part roundtable discussion, and demonstrations of KM projects. Future NER funding for KM pilot sites was also announced. It is expected that eventually pilot sites will make their transition to Healthcare Knowledge Services Centers (HKSCs) in their respective institutions.

Results: The NER office is in the middle of the implementation phase of its five-year strategic plan to transition hospital libraries to HKSCs. As part of the "Regional KM Initiative," proposals for pilot sites were solicited over the summer of 2011. The NER received three proposals, and a formal review process was conducted by the RAC Hospital Library Advisory Group. The HKSC Field Guide was completed as a "how-to" guide for prospective pilots. For 2011/12, two pilots were selected: one funded and one unfunded. Work was performed in a six-month period (November 2011–April 2012).

2:45 p.m.

Librarians Leading Knowledge Management

Pamela S. Bradigan, AHIP, Director; **Lynda J. Hartel, AHIP,** Associate Director, Knowledge Integration; Health Sciences Library, Ohio State University–Columbus

Objectives: Librarians have long been leaders in organizing intellectual assets that stimulate the development and preservation of knowledge in their organizations, and libraries are often seen as the center of knowledge acquisition. This paper offers practical considerations for the implementation of knowledge management (KM) programs based on experience with projects undertaken at The Ohio State University (OSU) Health Sciences Library (HSL).

Methods: For nearly ten years, OSU health sciences librarians and technology professionals have collaborated on several significant KM initiatives. Projects include the development and publication data integration associated with OSU's first faculty expertise system, the organization and provision of metadata for improved discovery and delivery of collections for patient education and continuing medical education, and the integration of library resources into electronic medical and patient health record systems. Additionally, library staff members have conducted surveys across the health sciences to identify learning object repositories and assess the information management needs of researchers. In collaboration with biomedical informatics and information technology colleagues, librarians recently conducted a knowledge audit and interviewed customers to learn how they obtain, share, manage, and value workplace knowledge resources.

Results: The authors will discuss the challenges and opportunities realized as a result of earlier KM projects. Key among these is the need to develop relationships, share expertise, and seek joint opportunities. Additionally, preliminary findings from recent audits will be presented. These activities and assessments will be used to inform future KM programs and services aimed at library customers.

Conclusions: Building on the lessons learned from earlier KM initiatives, the authors are now developing a knowledge sharing program in the library. This latest initiative is designed to maximize library employee expertise and communications, further advance the library's strategic plan, ensure continuous professional development, and facilitate innovative collaborations with university partners.

3:05 p.m.

Enhancing PubMed Search Outcomes for Evidence-Based Articles with Customized My NCBI Filters

Tanya Shkolnikov, AHIP, Senior Reference and Education Librarian, Medical Library, North Shore University Hospital, Manhasset, NY

Objectives: The customized Levels of Evidence Filters (LEF) for PubMed searches provide medical residents with a much-needed tool for retrieving evidence-based medicine (EBM) information in accordance with the levels of evidence pyramid. LEF allow users to locate materials with higher levels of evidence in one click and to easily access articles with lower levels of evidence, if needed.

Methods: We observed residents' information-seeking behavior in two settings: in their lab during point-of-care classes and in the medical library. The findings were similar in both settings:

• While residents understand the advantages of PubMed limits, the constant time constraints and Google-shaped expectations of quick and easy information retrieval make them reluctant to use PubMed limits.

• While recognizing the advantages of Clinical Queries, residents rarely use it and prefer initiating searches from the PubMed home page.

A subsequent needs assessment suggested that residents would use PubMed more frequently if they were able to sort articles according to an evidence hierarchy in a speedy and accurate way. Based on the observations and the needs assessment, we developed customized My NCBI filters and presented them in 2010, to internal medicine residents during classes on EBM resources.

Results: The initial survey showed that 30% of residents used 1 filter regularly. Other filters were used rarely. The long-term assessment (one-on-one interviews) was conducted 4 months after classes. A thorough analysis of residents' feedback led us to develop the entirely new set of filters that reflects the levels of evidence pyramid. These LEF were presented during EBM classes in the fall of 2011. In the evaluation forms after the class, 100% of residents indicated that filters were relevant to their clinical practice and 98% intended to use them. With the

response rate 73%, the delayed evaluation (survey) in February 2012 showed that 71% of respondents actually use LEF in their PubMed searches.
Conclusions: Library-developed LEF allow residents to easily, quickly, and successfully retrieve the best available EBM articles at the point of care, thus making PubMed more appealing to users.

Leadership and Management Section

Smells Like Team Spirit: Partnerships to Move Your Library Forward

Cosponsored by Corporate Information Services Section, Institutional Animal Care and Use SIG, Veterinary Medical Libraries Section, Cancer Librarians Section

WSCC, Room 619/620, Level Six

2:03 p.m.
Mentoring for Collaboration: More than Just Knowledge Skills
Rachel R. Walden, Librarian, Knowledge Management; **Nunzia B. Giuse, AHIP, FMLA,** Assistant Vice Chancellor, Knowledge Management, Director, Eskind Biomedical Library, and Professor, Department of Biomedical Informatics and Department of Medicine; Eskind Biomedical Library, Vanderbilt University, Nashville, TN
Objectives: To describe approaches to fostering soft skills and flexibility for successful collaboration via two case studies: (1) collaboration of pharmacogenetics information experts and librarians with cancer researchers to promote currency, scalability, and knowledge management practices for a web-based, tumor, gene-focused cancer therapy decision support tool; and (2) integration with informatics teams and processes to promote evidence-based medicine in distributed outpatient settings.
Methods: Building on the foundation of an extensive training program, we have successfully embedded information specialists in high-priority, interdisciplinary initiatives, from rounding with clinical teams to support for personalized medicine. We have recruited and integrated personnel with pharmacogenetics and biomedical research expertise to provide knowledge for supporting these medical center efforts. While our staff training program equips all team members with a solid skill base for information services and knowledge management, successful collaboration requires development of soft skills such as political savvy, clear understanding of leadership goals, and the ability to quickly adapt in a changing landscape. Ongoing collaboration beyond pilot projects also requires cross-training, communication, and flexibility to maintain partnerships through personnel and priority changes. These skills require explicit teaching and mentorship as much or more than traditional information skills in order to form successful partnerships and grow future leaders.
Results: To create successful partnerships with clinical and research teams in the medical center, we have developed a strong information science and communication training program that emphasizes medical knowledge and research methods. Adding to a group of knowledgeable clinical librarians, we have integrated professionals with a variety of degrees in the biosciences (e.g., genetics, pharmacology). Our librarians have worked to coach these experts on information science skills, while they in turn have helped expand the librarians' medical, research, and genetics knowledge. A variety of mentoring, modeling, and educational techniques also have been employed to foster the necessary skills for building successful collaborations. As a result of these efforts, our personnel are successfully involved in a wide range of projects including clinical rounding, order set development, federally funded systematic reviews, and other cross-disciplinary efforts to increase the practice of evidence-based medicine. Information specialists from a variety of professional backgrounds have become respected partners in an award-winning cancer genetics project and other cutting edge teams tackling personalized medicine and pharmacogenetics. By building our explicit and tacit knowledgebase and incorporating biosciences experts, our team is able to handle more than 800 complex evidence requests yearly, providing high-quality services to the medical center.
Conclusions: Cross-training between disciplines and development of tacit skills requires dedicated, time-consuming effort. Through an explicit commitment to developing soft skills, incorporating a variety of biosciences professionals into our team, and providing ongoing learning experiences, we have created successful partnerships to advance the goals of Vanderbilt Medical Center and foster a growing demand for the expertise of our Eskind Biomedical Library and Knowledge Management teams.

2:20 p.m.
Collaborations and Partnerships: We Accomplish Much More When We Work Together
Andrea Lynch, Scholarly Communication Librarian, Lee Graff Medical & Scientific Library, City of Hope, Duarte, CA

2:25 p.m.
Essential Skills for Biomedical Librarians Engaging In Cross-Disciplinary, Multi-Institutional Team Projects: Experiences from the VIVO Collaboration
Rolando Garcia-Milian, Basic Biomedical Sciences Librarian/Liaison, Biomedical and Health Information Services, Health Science Center Libraries, University of Florida–Gainesville; **Hannah F. Norton, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries, University of Florida–Gainesville; **Beth Auten, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries, University of Florida–Gainesville; **Valrie Davis,** Assistant University Librarian, Marston Science Library, University of Florida–Gainesville; **Kristi Holmes,** Bioinformaticist, Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO; **Margeaux Johnson,** Science and Technology Librarian, Marston Science Library, University of Florida–Gainesville; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute, University of Florida–Gainesville
Objectives: Cross-disciplinary, team-based collaboration is essential for successfully addressing today's complex biomedical research questions. This collaborative approach is especially critical when translating current knowledge into effective research and educational programs. While librarians frequently work on teams of colleagues, our experience working on large-scale, cross-disciplinary teams may be limited. This study identifies challenges and skills needed as librarians integrate into cross-disciplinary teams.

Methods: Data were collected through semi-structured interviews of eight librarians and one bioinformatician who participated in the development and implementation of the multi-institution, multidisciplinary research discovery and collaboration platform, VIVO (www.vivoweb.org). The interviews were based on three main topics: challenges, skills, and the lessons learned from working on the National Institutes of Health (NIH)-funded VIVO project. The resulting data were analyzed in the light of the science of team science literature. This presentation will discuss the results of this study, addressing the skills biomedical librarians need to be part of cross-disciplinary teams and highlighting the unique skills we bring from the library to these teams. The presentation will also discuss the benefits of such team collaborations in the context of clinical and translational science and campus e-science initiatives.
Results: In order to determine the skills needed for successful teamwork, a set of positive and negative factors affecting the dynamics of the team interaction and performance were first identified. Perceived negative influences on team dynamics included distant and cross-disciplinary communication issues, changing roles of team members, lack of leadership training for team leaders, and insufficient integration of the project into existing campus structures. Perceived positive influences on team dynamics included getting feedback from others, enthusiasm toward the project from the outside community, unity against common challenges, and potential for future collaboration. Given these influences on team dynamics, skills and talents in communication, perseverance, creativity, flexibility, and optimism, among others, were found to be essential.
Conclusions: This presentation contributes to an understanding of the dynamics of library teams in large, cross-disciplinary projects like VIVO. The knowledge gained from this unique learning experience will likely be relevant to other library teams seeking to engage in similar projects.

2:42 p.m.
Moving Forward Together: Two Game-Changing Collaborations
Barbara Rochen Renner, Library Services Evaluation Specialist and Liaison, Allied Health Sciences, Health Sciences Library, University of North Carolina–Chapel Hill

2:48 p.m.
Dealing with Data: Partnering to Support E-Science and Data Management on Campus
Andrea S. Horne, Research and Data Services Manager, Claude Moore Health Sciences Library; **Bart Ragon,** Associate Director, Knowledge Integration, Research and Technology, Claude Moore Health Sciences Library; **Andrew Sallans,** Head, Strategic Data Initiatives, University of Virginia Library; **Sherry Lake,** Senior Scientific Data Consultant, Charles L. Brown Science and Engineering Library; University of Virginia–Charlottesville
Objectives: This paper describes the collaboration between two academic libraries related to e-science and data management. Through a mutually beneficial partnership, a health sciences librarian increased e-science and data management knowledge, which supported library planning and development of services around these issues. A science library gained staffing and furthered connections to campus biomedical research efforts.
Methods: Setting: An academic medical center library and an academic library's data consulting group. Brief Description: Changes in the research environment related to data, including changing funding agency requirements for data management and sharing, led an academic health sciences library to seek to expand services to biomedical researchers in the areas of e-science and data support. A partnership was formed with an academic library's data consulting group and a team of librarians leading university efforts to support data management efforts throughout the research lifecycle, including data policies, good data habits, use of metadata, integration of technology, and data ownership issues. An internship allowed the health sciences librarian to work directly with the data consulting librarians to gain knowledge and skills around data issues and ultimately contribute to the team's activities including data interviews and data management plan consultation.
Results: The internship provided a number of opportunities for the health sciences librarian to participate in current efforts to support researchers. As of February 2012, efforts included consulting on five data management plan drafts submitted by investigators seeking to comply with National Science Foundation (NSF) mandates and crafting National Institutes of Health (NIH)-specific support for an online data management tool. Additional efforts included recruiting biomedical faculty for data interviews and conducting six of these interviews to date. In addition to these activities, there was great value in informal learning and sharing opportunities created during meetings and discussions on topics such as analyzing the results of the data interviews, data deposit in the university's institutional repository, response to data-related federal requests for information, open access and intellectual property issues, and management of images as data.
Conclusions: The internship transitioned into regular, ongoing visits by the health sciences librarian to the scientific data consulting group and continued participation in team activities, including strategic planning. The librarian has now involved other health sciences library staff in data management activities, including data management plan review and data interviews.

3:05 p.m.
Smells Like Team Spirit: MedlinePLUS Videos for Patient Education, A Partnership Between the University of Texas Health Sciences Center Libraries and CareLink, University Health System
Pegeen Anne Seger, Head, Outreach Services, Libraries, University of Texas Health Science Center–San Antonio

3:11 p.m.
Double Play Staffing Model: Partnering to Serve Dual Needs
Sarah Fletcher Harper, Web Services Librarian; **Ruth Riley, AHIP,** Director, Library Services; School of Medicine Library, University of South Carolina–Columbia
Objectives: As budgets shrink and vacant positions remain unfilled, libraries are faced with the challenge of reconfiguring their staffing models to meet institutional information needs. This paper discusses a partnership between the library and the medical school dean to reconfigure a web services librarian position into a hybrid position that serves the library and the medical school's ultrasound institute.
Methods: When a medical school library was faced with a hiring freeze and insufficient funding to fill its vacant web services librarian position, duties were temporarily reassigned to another

librarian. As a result of successful partnering with the medical school dean to provide limited web support for ultrasound education initiatives, the dean approached the library about providing partial funding for the position if the library would dedicate part of the position to the initiatives. A hybrid position was created and jointly funded by the library and the dean. Library responsibilities included maintaining the library website, reference, and library instruction. Ultrasound project responsibilities included redesign and maintenance of websites for the Society of Ultrasound in Medical Education and the Ultrasound Institute, development of a website for the World Congress on Ultrasound in Medical Education, and attendance at weekly ultrasound institute faculty meetings.
Results: The position has evolved slightly from its original description. The ultrasound institute faculty have been very enthusiastic about having "their own" librarian. In addition to the previously outlined web design duties, the web services librarian has begun to assist them with reference questions and literature searches and has developed a wiki of ultrasound reference materials and articles to assist them in their research. It has evolved into an embedded librarian position that is beneficial to both parties.
Conclusions: The partnership with the medical school dean and the joint position has thus far worked well and met the dual needs of the two departments. Providing web support for high-priority projects of the dean gives the library valuable political clout. It is a new way for the library to connect with users it may not have otherwise reached and is an innovative way to adapt to a difficult budget environment.

Nursing and Allied Health Resources Section

Fundamentals of the Game: Skill Building for Health Professional Information Literacy and Evidence-Based Practice

Cosponsored by Educational Media and Technologies Section, Public Health/Health Administration Section, African American Medical Librarians Alliance SIG

WSCC, Room 606/607, Level Six

2:05 p.m.
Characterizing Clinical Questions of Occupational Therapists, Physical Therapists, and Speech-Language Pathologists
Lorie Kloda, AHIP, PhD candidate, School of Information Studies, and Associate Librarian, McGill University Libraries; **Joan C. Bartlett,** Associate Professor, School of Information Studies; McGill University, Montreal, PQ, Canada
Objectives: This study explored the information needs of rehabilitation therapists working with patients with stroke. It sought to investigate the clinical questions asked by occupational therapists, physical therapists, and speech-language pathologists during their everyday practice. More specifically, it sought to identify the types of questions asked, and the structure of the questions.
Methods: Through purposive, maximum variation sampling, 15 rehabilitation therapists with a range of 1 to 35 years' experience were recruited. The diary: diary-interview method was employed for data gathering. Informants recorded their clinical questions in a diary over several weeks; a follow-up interview elicited more details about the questions recorded in the diary. They documented a total of 129 clinical questions; these were deductively and inductively analyzed using template analysis to provide a typology of questions asked by occupational therapists, physical therapists, and speech-language pathologists. Clinical questions were also scrutinized to determine whether question-formulating structural elements proposed in the evidence-based practice framework (e.g., problem, population, intervention/exposure, comparison, outcome, stakeholders, duration [PICO]) were present and to evaluate the complexity of the questions.
Results: Rehabilitation therapists recorded clinical questions that could be categorized as having one or more of twelve different foci: treatment selection, assessment tool selection, treatment procedures, assessment tool procedures, terminology, prognosis, etiology, clinical manifestations of disease, epidemiology, practice-related self-improvement, patient and family experiences or concerns, and anatomy, physiology, and pathophysiology. Clinical questions most commonly focused on treatment selection, clinical manifestations of disease, and prognosis. Clinical questions contained one or more of the following elements: problem, population, intervention, context, temporality, patient stakeholder, professional stakeholder, and outcome. Most clinical questions contained one or two structural elements.
Conclusions: Therapists working in stroke rehabilitation have diverse clinical questions in their everyday practice. These questions can be categorized using a typology of 12 different foci, some of which are comparable to categories of questions asked by physicians and residents. The structural elements that emerged in the analysis of the 129 clinical questions suggest that the PICO question-formulation structure is inadequate in representing rehabilitation therapists' formalized information needs. The findings suggest that the evidence-based practice framework is inadequate for describing how rehabilitation therapists formulate their clinical questions. Implications for library and information professionals will be discussed.

2:20 p.m.
Information Literacy Standards for Nursing in Action
Loree Hyde, Reference Librarian, OHSU Library; **Diane Bauer,** Instructor, School of Nursing Portland Campus; Oregon Health & Science University–Portland
Objectives: In the fall of 2010, a call for participants interested in researching information literacy (IL) standards for nursing went out to the medical library community. After a review of existing literature in nursing education, the resulting group came to the conclusion that sufficient IL standards did not exist and that such standards should be developed.
Methods: A proposal was brought to the Health Sciences Interest Group (HSIG) of the Association of College and Research Libraries (ACRL) at the annual American Library Association (ALA) meeting in June of 2011. HSIG agreed to support the development of IL standards specific to the health sciences, similar to the science and technology standards but broken out more discreetly by subject area (nurses, physician assistants, physicians, etc.). They were also in support of the proposal to make nursing the first subject addressed and gave the green light to form a working group. That group then mapped American Association of Colleges of Nursing (AACN) guidelines, from their Essentials Series, to the general ACRL information literacy standards and, per HSIG's review at the ALA midwinter meeting, used that mapping document as a basis for creating the standards for nursing.

Diane Bauer joined the group and lent her expertise in nursing education for the writing phase of the project. Bauer has been teaching nursing courses that integrate the ACRL IL standards for a number of years and has taught dedicated evidence-based practice (EB)P courses at the Oregon Health & Science University (OHSU) School of Nursing.
Results: In this presentation, OHSU Librarian Loree Hyde will provide an overview of the mapping process and development of the nursing IL standards, and Bauer will discuss how the new standards compare to the standards she has used previously in her courses and the gaps they address.

2:35 p.m.
Igniting a Spirit of Inquiry in Bachelor of Science in Nursing Accelerated Students
Pamela Sherwill-Navarro, AHIP, Librarian and Instructor, Library, Remington College of Nursing, Lake Mary, FL
Objectives: Nursing students often dread taking a research course and avoid reading research articles. A journal club activity was added to a clinical conference course to introduce the students to the research literature and evidence-based practice (EBP). The objectives of included teaching students some basic techniques in reading and evaluating research, beginning a dialog about EBP, and demystifying nursing research.
Methods: During one of the preclinical lab days, a brief presentation on EBP, nursing research, and journal club is done. Journal club is held twice for each clinical group during the quarter. Two articles are selected. The citations are posted on Moodle, the learning management system used by the school. Students are instructed to read the articles prior to the journal club session and to highlight sections that they thought were interesting or important and to jot down any questions. The librarian/registered nurse would go to the clinical facilities at the end of their day to facilitate journal club. A set of questions is prepared prior to the session; however the students are allowed to determine the focus of the discussion. Students' evaluations of journal club will be conducted as a part of the clinical course and research evaluation.
Results: Questionnaires were distributed to the senior class prior to graduation. Twenty-six were distributed, and fourteen were completed. The questionnaires consisted of six open-ended questions. Eleven students reported that journal club helped them to feel more comfortable reading research, but three did not find it helpful. Eleven students found the selected articles relevant, and three found at least one of the articles helpful. One response stated that student input into article selection would increase relevancy. When asked for topic suggestions, the majority of suggestions were related to best practices related to nursing skills.
Conclusions: The survey will be administered to the next student cohort after completing nursing research. Based up the positive feedback journal club will be continued and expanded to include the psychiatric/mental health clinical rotations. When journal club is conducted during medical surgical rotations the next time, student input for article topics will be requested.

2:44 p.m.
Nurse Residency Programs: Librarians Supporting New Nurses in Evidence-Based Practice
Katherine Downton, Liaison and Outreach Services Librarian; **Emilie Ludeman,** Liaison and Outreach Services Librarian; Health Sciences and Human Services Library, University of Maryland–Baltimore
Objectives: This paper will examine the recent emergence of nurse residency programs and discuss strategies being used by nursing liaison librarians to develop relationships with nurses early in their careers and help bridge knowledge gaps in evidence-based practice skills that remain after graduation from undergraduate nursing programs.
Methods: Faculty librarians are collaborating with nurse educators at a university-affiliated medical center's office of clinical practice and professional development. To establish connections with hospital nurses, librarians attended meetings with the hospital's nursing research council, attended poster presentations by nurse residents, and met with an education specialist from the hospital. Librarians became familiar with the new national nurse residency curriculum created by the University HealthSystem Consortium (UHC) and the American Association of Colleges of Nursing (AACN) to help determine how they might best support the residency program. A need to actively participate in educational programming at the hospital and help nurse residents develop skills in locating and evaluating high-quality evidence was identified. During 2011, librarians were integrated into three resident evidence-based practice (EBP) orientations and are scheduled to work with future cohorts.
Results: Since becoming involved with the program in 2011, librarians have participated in the training of every new cohort of nurse residents. Results of program evaluations from residents have been positive. Extensive assessment is done as part of the UHC/AACN program as a whole; however, in the near future librarians hope to work with the educational coordinator to implement a knowledge assessment test prior to the classes and a post-test following the nurses' EBP poster presentations.
Conclusions: Librarians seeking to increase visibility among a new generation of hospital nurses must cultivate those relationships by initiating collaborative projects with hospitals and demonstrating expertise in searching for evidence and teaching health information literacy. The university hospital's UHC/AACN nurse residency program has presented librarians with an opportunity to increase involvement in the hospital and support new nurses in EBP.

2:53 p.m.
Information Literacy Skills for Nurses: Team Teaching by Nurses and a Librarian
Marilyn L. Tinsley, Research Services Librarian and Nursing Liaison, Lane Medical Library and Knowledge Management Center, Stanford University, Stanford, CA; **Lynda Copeland-Fields,** Senior Staff Nurse, Medical-Surgical-Neurosurgical-Trauma Intensive Care Unit, Stanford Hospital and Clinics, Stanford, CA
Objectives: Many nurses find evidence-based practice intimidating; they report that locating best evidence can be challenging. To address this issue, the Research Council at Stanford Hospital developed a class to foster nurses' information literacy skills and to build confidence through related hands-on practice. The nursing liaison librarian has been integral in the design of the class and its teaching.
Methods: This practical and popular two-hour class is offered four to six times per year to bedside nurses and other hands-on clinicians. Peer instruction was selected as the most promising mode of teaching. Class material is presented in segments: navigating the hospital intranet and the library's website; assisting participants in acquiring their SUNet ID for remote access;

constructing a search question using patient/problem, intervention, comparison, outcome (PICO); basic searching of PubMed, CINAHL, Cochrane, and JoAnna Briggs; and critiquing a research article. Research Council members, including the library's nursing liaison, teach as a team and serve as coaches throughout the session, circulating around the classroom to assist individual participants. Initially, a scavenger-hunt exercise provided an opportunity for participants to practice and apply what they had learned. Currently, participants suggest search terms to the instructor, who uses the terms to demonstrate the functionality of the various databases. If time permits, participants are invited to search topics of interest on their own or with help from the librarian and class proctors. The instructors collaborate as a team on improving class content, based on the results of evaluation forms submitted by participants.
Results: Between September 2009 and June 2011, we presented eight workshops to a total of seventy-one participants. Comments on class evaluations indicate that participants anticipated using both hospital intranet and library resources immediately in their work environments. Forming a PICO question and learning techniques for quick, efficient searching were also valued.
Conclusions: Due to popular demand, the number of class sessions has been increased for 2012. Team teaching, plus having one to two additional Research Council members available for individual coaching, increases participant satisfaction and learning and ensures that all participants can keep up with the material. In the future, we plan to develop an advanced online self-paced workshop that gives continuing education unit credit to participants. We will survey participants about what skills and resources they found most useful after the workshop and incorporate suggestions into future workshops.

3:02 p.m.
A Whole New Ballgame: Teaching Evidence-Based Practice in the Hospital
Lindsay E. Blake, AHIP, Clinical Librarian; **Darra Ballance, AHIP,** Assistant Director, Retention Programming and Technology; Robert B. Greenblatt, MD Library, Georgia Health Sciences University–Augusta
Objectives: A continuing education (CE) course was created for librarians and nurses to educate both groups on the use of evidence-based practice (EBP) in the hospital setting. We want to expand this course to suit other health professionals.
Methods: Three librarians worked together to create a comprehensive review of EBP. The course was created in three parts to cover the basics tenets of EBP, how to apply EBP to the hospital setting, and how to integrate patient preferences into EBP and patient care. MLA CE credit was obtained for librarians, and Georgia Nursing Association contact hours were obtained for nurses. Participants were given a pretest and posttest. Institutional review board approval was granted by the hospital and the academic institution.
Results: Through several classes taught to both nurses and librarians, we found that EBP knowledge was improved after the three-hour course. Comments revealed some areas for improvement. Both groups wanted more techniques for evaluating articles to determine if they are evidence-based and more details on statistical information found in these articles. Nurses wanted more information on how to directly apply results and how to conduct evidence-based research themselves.
Conclusions: Because the use of EBP is spreading to more health professions, we are working on redesigning the course to appeal to a wider audience. Physicians have opportunities to receive evidence-based medicine training, but there are fewer training avenues for nursing and allied health professionals outside of academia. We hope to redevelop our course to appeal to these groups and bring EBP from the colleges into the practice setting.

3:11 p.m.
Building Information Literacy Skills: Nurses and Librarians Advancing Research and Evidence-Based Practice at an Academic Medical Center
Beth Auten, AHIP, Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Gale Danek,** Administrative Director, Nursing Research and Magnet; University of Florida–Gainesville
Objectives: The purpose of the research project was to determine if library and information literacy instruction presented by a health sciences librarian raises awareness and use of library resources among nursing staff and administration at an academic medical center.
Methods: In 2010, our nursing research program was revised to include a structured fellowship for nursing staff. Our new nursing librarian taught a session on searching the literature as part of the fellowship program. The education on searching the literature was well received, and the clinical leader orientation program requested that the librarian repeat the content for their group. A staff survey was done about this time to identify education needs. The results identified needs related to using the library resources, searching for research, and finding best practice (evidence-based) guidelines. The librarian conducted education sessions on using the health sciences library's online resources. These were attended by 136 nurses, many of whom are on various nursing councils or in leadership roles. This pilot strategy was evaluated via exit surveys; a survey link was distributed to participants.
Results: Between February and July 2011, 68 nurses voluntarily participated in a basic introduction to the library; from this group, there were 41 completed exit surveys, for a response rate of 60%. Over half of the nurses who took the survey were experienced nurses with over 25 years of experience. The largest group of respondents considered themselves to be advanced beginners with regard to using library resources. All of the participating nurses reported that the training session was helpful to them. They provided suggestions for ways to improve the course in the future and recommended that it be offered regularly. Responses to a subsequent needs assessment survey in 2011 showed an improvement in the level of awareness and knowledge related to using library resources.
Conclusions: The training intervention was useful to the participants. This pilot project will serve to inform the development of future in-person library instruction in the hospital. Based on open-ended responses to the survey questions related to the format of the instruction, sessions will be scheduled quarterly in the hospital computer lab. Other educational programs and possibly different delivery methods, such as online modules, may also be developed to reach a wider population.

Pharmacy and Drug Information Section

PDI AccessPharmacy Lecture

Cosponsored by Dental Section, Public Health/Health Administration Section, Medical Library Education Section, Complementary and Alternative Medicine SIG

WSCC, Room 604, Level Six

2:05 p.m.
How Comparative Effectiveness Research Is "Changing the Game"
Sean D. Sullivan, Professor, Pharmacy and Public Health; Director, Pharmaceutical Outcomes Research and Policy Program; and Associate Dean, Research, School of Pharmacy, University of Washington–Seattle

Public Health/Health Administration Section

Teamwork for Evidence-Based Practice: Collaboration for Improving Evidence-Based Practice

Cosponsored by Complementary and Alternative Medicine SIG, Clinical Librarians and Evidence-Based Health Care SIG, Relevant Issues Section

WSCC, Room 611, Level Six

2:05 p.m.
Peer Review of Comparative Effectiveness Review Search Strategies
Robin A. Paynter, Research Librarian, Oregon Evidence-Based Practice Center; **Rose Relevo, AHIP,** Research Librarian, Agency for Healthcare Research and Quality Effective Healthcare Program Scientific Resource Center; Oregon Health & Science University–Portland
Objectives: To evaluate instituting peer-review of search strategies in the Agency for Healthcare Research and Quality's (AHRQ's) Effective Health Care (EHC) Program. Context: Research reveals that errors are commonplace in systematic review search strategies; also the Institute of Medicine's (IOM's) Finding What Works in Health Care: Standards for Systematic Reviews calls for adoption of peer review of search strategies as a standard to improve quality.
Methods: Twenty-five technical expert peer reviewers (TEPR) across all fourteen AHRQ EHC Evidence-based Practice Centers participated. TEPRs were split into two groups: experimental (each wrote reviews using a "free-form" approach and by utilizing the Peer Review of Search Strategies Instrument) and control (who only wrote "free-form" reviews). TEPR survey instruments and reviews will be analyzed both quantitatively and qualitatively to determine which review format proves to be more feasible time-wise and produces better quality reviews.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

2:21 p.m.
Network Development for Data Development: The Community Health Informatics Project
Elaine R. Hicks, Education/Outreach Librarian, Rudolph Matas Library of the Health Sciences, Tulane University, New Orleans, LA
Objectives: By the end of this session, participants will be able to replicate a sustainable campus-community health data partnership to (1) enable advocacy for appropriate health services and health promotion programs through improved access to local health data, (2) define requirements and explore mechanisms for sustaining a campus-community public health data initiative, and (3) establish relationships to improve data systems.
Methods: The Online Health Database is a campus-community partnership between the Champaign-Urbana Public Health District and the Illinois Informatics Initiative of the University of Illinois. It was created to develop a sustainable framework to collect data, manage data, engage a community in the use of local health data, and enable research by updating a local health data website. Graduate student interns were recruited from three disciplines (geography, public health [PH], and library and information science [LIS]) to create quality control processes to assure access to and quality of data and geo-code vital statistics, and improve an interface to engage consumers in using their health data. The student experience also included participation in the local five-year community health needs assessment, attendance at the annual meeting of the National Association of County and City Health Officials, and development of a proposal to create a minority health database.
Results: The PH student created a double-bind procedure for data entry that also established a continuous service project for PH students. The geo-coding process developed by the geography student resulted in a 99% geo-coding rate for 2009 vital statistics. Production of geo-coded maps revealed higher rates and unknown distributions of diseases. An examination of local health data websites by the LIS student resulted in a new interface. A formative evaluation guided project development. Subsequent to the project, mobile apps were developed to present public health data to enforce tobacco ordinances and support findings from restaurant inspections.
Conclusions: This model project demonstrates how to improve local health data surveillance, and identify and develop technologies for health promotion and disease prevention in the context of a sustainable campus-community initiative. Its timely development creates a mechanism to support state health information exchange cooperative agreements between states and the Health and Human Services Office of the National Coordinator for Health Information Technology.

2:37 p.m.
Electronic Health Record: Integrating Evidence-Based Information at the Point of Clinical Decision Making
Susan A. Fowler, Medical Librarian, Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO; **Lauren H. Yaeger,** Medical Librarian, St. Louis Children's Hospital, Washington University in St. Louis, St. Louis, MO; **Feliciano (Pele) Yu Jr.,** Assistant Professor, Pediatrics; Chief Medical Information Officer, St. Louis Children, Washington University Pediatric Computing Facility, Washington University in St. Louis, St. Louis, MO; **Dwight Doerhoff,** Patient Care Information Systems Specialist, St. Louis Children's Hospital, BJC Health Care, St. Louis, MO; **Paul Schoening,** Associate Dean, Academic Information Management, and Director, Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO; **Betsy Kelly,** Associate Director, Health Information Resources and Assessment and

Evaluation Coordinator, National Network of Libraries of Medicine, MidContinental Region, Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO
Objectives: To embed electronic decision support tools from an academic medical library into the existing electronic medical record system at a partner teaching hospital so that physicians could access them at the point of decision making to aid evidence-based practice.
Methods: An interdisciplinary team including academic clinical librarians, the chief medical information officer, physicians, and an information systems coordinator was convened. Librarians suggested the team consider a number of point-of-care clinical resources. The committee identified the various electronic health record (EHR) systems currently being used by the hospital, described the desired mechanism to best fit decision support resources into the physician workflow, and identified the vendor most prepared to integrate the resources into the chosen EHR system. In close collaboration with the diagnostic decision support resource vendor, a knowledge page was created that automatically retrieves patient demographic data, positive clinical findings, and considered diagnosis from the EHR and initiates a search across library clinical resources, displaying the results in a separate browser window. Prior to piloting the integrated system, medical librarians provided individual and group training to the physicians.

2:53 p.m.
Two for the Win: Resident/Librarian Collaboration to Teach an Evidence-Based Medicine Curriculum
Jonathan B. Koffel, Clinical Information Librarian, Bio-Medical Library; **Ganesh Asaithambi,** Medical Resident, Neurology; University of Minnesota–Minneapolis
Objectives: To describe a collaboration between a clinical librarian and chief resident to develop an evidence-based practice training program for neurology residents and outline how liaisons can implement a similar program at their own institutions.
Methods: Each year, the American Academy of Neurology (AAN) offers a free workshop to residency directors on how to teach evidence-based medicine. As part of an effort to create a more evidence-based culture in the department, the author and a chief resident were invited by the neurology residency director to attend the training as her designees. The librarian and chief then collaborated to design and teach an EBM training program for other residents and integrate EBM concepts and skills into departmental activities (e.g., rounds, journal club, case conference).
Results: An abbreviated six-lecture series was taught in spring of 2012, with the full series to begin summer 2012. These first sessions covered literature searching, critical appraisal, and integrating evidence into practice. While some residents reported learning the concepts earlier, for most they were new. Reception from residents and faculty was very positive, and the librarian's involvement helped reinforce his value and role. Journal club was also revamped to create a more streamlined article discussion, and a rubric was distributed to help attendees evaluate each article. Response to the revised journal club format was again very positive.
Conclusions: The AAN training program provides an excellent opportunity for collaboration between librarians and neurologists and helps builds a role for librarians as evidence-based medicine experts.

3:09 p.m.
Using Librarians in Experiential Learning in Evidence-Based Practice Education
Rebecca P. Winsett, Nurse Scientist; **Margaret Moutseous,** Manager, Baker Medical Library; **H. Lynn Johnson,** Staff Development Specialist, Women's and Children's Hospital; St. Mary's Medical Center, Evansville, IN
Objectives: Experiential learning introduced the structure/process of evidence-based practice (EBP) to nurses in a nonteaching hospital. The medical librarian, nurse scientist, and educational specialist worked collaboratively to develop and implement a two-day course that actively engaged participants. At course completion, participants prepared a pocket document showcasing the clinical question and literature findings. The librarian was essential for the program's success.
Methods: To experience each phase of the EBP process, the course directors collaborated on material preparation of a predetermined clinical question. The medical librarian developed five different search strategies and obtained all articles prior to the class, so that once participants performed the preplanned searches, the literature was available for reviewing, critiquing, and synthesizing. As there are very little didactic components, course preparation is much more intensive. Each element of EBP process was introduced followed by active participation. The medical librarian led the bibliographic instruction while each participant was logged on to the online databases. Once the EBP process was complete, participants used a template to publish the findings of the clinical question. Printed on cardstock as a trifold pocket document, the clinical question, keywords, and search yield along with the summary of the literature findings could be distributed house-wide.
Results: Experiential learning provided relevant and applicable experiences for the adult learner, particularly nurses who were associate-prepared or years beyond any formal education. We found having the entire class focus on a single relevant clinical question and guiding the group as they completed each step of the EBP process increased the comfort level and competency of finding and using research literature. The active involvement of the librarian who planned and prepared the searches and obtained any literature that was not a part of the library collection decreased the confusion and frustration of using the medical databases for new or inexperienced users.
Conclusions: Using experiential learning as the strategy to improve engagement in EBP in front line nurses is much more effective for adult learners. The medical librarian was an essential partner in this collaborative effort, both in the development and course instruction. In this era where community nonteaching hospitals often see library collections diminish, this innovative collaboration has been very successful. Over the past five years, the librarian has been involved in seventy-eight EBP projects and has found that the experiential learning course has increased the confidence and planning of future EBP projects over the previous didactic model.

Veterinary Medical Libraries Section

Instant Replay: How Technology Is Changing Our Game

Cosponsored by Osteopathic Libraries SIG, Institutional Animal Care and Use SIG

WSCC, Room 615/616, Level Six

2:05 p.m.
Scanning Technology Selection Impacts Usefulness of Image-Rich Content
Kristine M. Alpi, AHIP, Director, William Rand Kenan, Jr. Library of Veterinary Medicine; **James C. Brown Jr.,** Clinical Assistant Professor, Diagnostic Imaging; **Jennifer A. Neel,** Assistant Professor, Clinical Pathology, College of Veterinary Medicine; **Carol B. Grindem,** Professor, Clinical Pathology, College of Veterinary Medicine; **James B. Harper,** Interim Head, Access and Delivery Services, NCSU Libraries; **Leigh G. Clark,** Manager, Interlibrary Loan and Document Delivery Services, Veterinary Medicine Library; North Carolina State University–Raleigh
Objectives: Faculty and residents indicate that clinical and research usefulness of articles can depend on image quality. This internal review board (IRB)-approved study addresses whether scans of figures in black and white, grayscale or color, or portable document format (PDF) to tagged image format file (TIFF) conversions, as typically provided by interlibrary loan (ILL)/document delivery (DD), are viewed by radiology and pathology faculty and residents as acceptable replacements for original digital articles.
Methods: Eighteen figures representing diverse studies from major journals in radiology, clinical, and anatomic pathology were selected by residency coordinators. Original digital PDFs are the controls. Each figure was prepared in three or four experimental condition images: PDF converted to TIFF, and scans from the print journal in black and white, grayscale, and when appropriate, color—all using standard ILL/DD scanning parameters. Independent observers in the three disciplines, one with board certification and three residents, viewed each image online and indicated individually whether an image was acceptable and whether they could identify the feature described in the figure caption. They also ranked all the experimental conditions of each figure in terms of usefulness. Evaluating the image as the unit of analysis provides rates of acceptable scans and user preferences for scanning involving images in each discipline and across the three disciplines.
Results: Of 982 assessments of features in 87 anatomic pathology, 83 clinical pathology, and 77 radiology images, 511 (52%) allowed identification. Identification varied from 94% for originals and 90% for conversions to 3% for black and white, 26% for grayscale, and 47% for color. Unacceptable images (405) comprised 41% of 987 responses: 97% of black and white, 66% of grayscale, 41% of color, 1% of conversions, and no originals. For noncolor originals (n=96), unacceptability decreased to 48% for grayscale but remained 96% for black and white. Hypothesized order (original, conversion, color, grayscale, black and white) was selected in 67% of 215 ranking assessments.
Conclusions: PDF to TIFF conversion maintaining color is acceptable for delivering digital content. Eleven percent of color images scanned in grayscale were useful; in black and white, usefulness fell below 1%. Acceptability of noncolor originals scanned in grayscale was 52%, emphasizing the need for digital originals. To be useful to radiologists and pathologists, print articles containing color or grayscale images should be scanned by libraries using those modalities.

2:25 p.m.
Moving out Ahead of the Curveball: One Library's Experience with Going Mobile
Alicia A. Livinski, Informationist/Biomedical Librarian; **Douglas J. Joubert,** Emerging Technologies Librarian; **MaShana Davis,** Web Content Manager; NIH Library, National Institutes of Health, Bethesda, MD
Objectives: Purpose: To describe the planning, development, implementation, and evaluation of a library-wide initiative focused on mobile computing, social media, and Web 2.0 technologies. Setting/Participants/Resources: Forty-eight staff at the National Institutes of Health (NIH) Library, which is a biomedical research library at NIH. Participants represent four different branches of the library and include twenty-nine librarians, two bioinformatics specialist, and seventeen support staff.
Methods: This paper explores the many and varied efforts undertaken to move the library out ahead of the curve and become the "go to" place for mobile devices at the NIH. From inception of the NIH Emerging Technologies Team (ETT) to the development of policies and procedures, selection and deployment of devices (iPads, Androids, BlackBerrys), designing of staff education initiatives (including brown bags, hands-on demos and user groups and a "Tech Challenge"), coordination of mobile initiatives into staff performance plans, troubleshooting, and evaluation, we will share what have done. Evaluation methods included online surveys measuring staff perceptions of mobile devices before and after receiving a device, reviews of mobile apps, use of circulating iPads, and qualitative information on iPad use from bioinformatics librarians and Informationists on clinical rounds. Oh, and we will definitely be sharing lessons learned and future directions.
Results: In January 2011, the ETT was formed to plan and assess the effective use of mobile devices by library staff and to support library staff development in these areas. The ETT developed a matrix related to mobile adoption, targets, project constraints, and any barriers to adoption. The ETT worked closely with library leadership to match learning objectives to individual performance plans. The results of our different evaluation methods are still under review; however, overall our staff did have a positive experience with using the devices as part of their work.
Conclusions: This library-wide initiative to place a mobile device in the hand of every staff member has completed its first phase and is still ongoing but with new objectives. Creative solutions were developed to overcome the challenges experienced to date in this initiative. Staff involved in the deployment of the devices and staff education and training learned many important lessons, which are informing our work in 2012.

2:45 p.m.
New Article Retrieval Tools: How They Affect User Work Flow and the Library's Role
Emily Morton-Owens, Assistant Curator and Web Services Librarian; **Aileen McCrillis,** Research Librarian; NYU Health Sciences Libraries, New York University–New York

Objectives: Many applications that handle bibliographic content—like EndNote, Papers, PubGet, and Mendeley—allow users to download articles via the library proxy, instead of using the library website. We will investigate what this emerging trend reveals about user needs and how it could impact and inform library technology.
Methods: The authors will perform a comparison analysis of the products' features, discuss user support models, and conduct a strengths, weaknesses, opportunities, threats (SWOT) analysis of what these tools may mean for libraries. In addition, we will expand on our anecdotal experience of supporting these users with a short, open-ended survey to gather more insight into what they need from the library. We will present a comparison of features of each application and suggest which are most useful for different user needs.
Results: Users particularly seek out these tools to create and format bibliographies; however, newer features like downloading and organizing portable document format (PDF) files and reading articles on mobile devices are also popular. Users are more likely to seek help online or from the application developer than from librarians. The tools may improve user experience, increase use of library resources, and inspire better library website design. However, they may also create additional technical support needs. Reduced exposure to library messaging online could cause users and management to mentally reduce the library to its digital collection, viewing it as nothing more than a proxy connection that does not require expert staff to maintain. We will consider how the library can find ways to add value in this environment.
Conclusions: Independent developers have created applications that aid researchers in retrieving and organizing articles, creating bibliographies, and more. Many of these tasks are not supported by library websites; others are done more efficiently by the new applications. These tools represent a trend that librarians should be prepared to both support and respond to by improving institutional library services.

3:05 p.m.
Biomedical Librarians as Information Nodes in Community Research Networks
Rolando Garcia-Milian, Basic Biomedical Sciences Librarian/Liaison, Biomedical and Health Information Services, Health Science Center Libraries; **Hannah F. Norton, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; University of Florida–Gainesville

Objectives: Community research networks, a main component of the National Science Foundation's (NSF's) Cyberinfrastructure for the 21st Century, are powerful tools for collaboration among researchers. ResearchGate is one such network with over a million users worldwide, half of them biomedical researchers and 486 affiliated with our institution. This study uses ResearchGate to explore characteristics of individuals' research networks and roles for librarians in this network.
Methods: In order to explore use of community research networks at a local level, librarians performed a detailed analysis of how researchers affiliated with our institution interact and seek information in the ResearchGate network (www.researchgate.net). Researchers affiliated with our institution were identified directly from their individual ResearchGate profiles and their affiliation confirmed using the institution's directory. Once our population was identified, we used statistical analyses to determine whether correlations exist among network-related variables including individual network size, research discipline, researcher title or position, number of publications, and participation in interest groups, among others. To investigate potential roles for librarians in this network, a biomedical librarian provided online reference services through several ResearchGate interest groups and used participant observation to characterize his activity and researchers' responses. The presence and activity of other information professionals on ResearchGate was also identified and characterized.
Results: In less than 8 months, the number of individuals affiliated with our institution on ResearchGate increased almost 10-fold (from 50 to 486 profiles). This increase in the number of individuals is associated with an increase in the size of their networks over time. The most well-represented disciplines among our institution's users are medicine- and biology-related ones, with 32.8% and 30.3%, respectively, followed by engineering, agriculture, and chemistry. After 8 months of providing subject specific reference on different interest groups, the network size of the biomedical librarian has grown from 0 to 180 followers. Of these followers, 10% are from our institution, 45% from the United States, and 55% from elsewhere around the world. The most popular and active group was methods, followed by biomedical sciences, cancer biology, neurosciences, biochemistry, and molecular biology.
Conclusions: This study contributes to an understanding of the activity and information-seeking behavior of biomedical researchers on community research networks. It also explores and discusses the provision of subject-specific reference and the role of librarians as information nodes in community research networks.

Section Programs 4

Tuesday, May 22, 2:00 p.m.–3:30 p.m.

2012 National Program Committee (General Topic)

It's Outta Here! Community Engagement

Cosponsored by Medical Library Education Section, New Members SIG

WSCC, Room 608/609, Level Six

2:05 p.m.
Partnering to Encourage Health Information Seeking at an Urban Minority Health Center: A Case Study
Prudence W. Dalrymple, AHIP, Teaching and Research Professor and Director, Institute for Health Informatics, iSchool; **Mary K. Green,** Associate Clinical Professor, Community Health Nursing, College of Nursing and Health Professions; **Kathleen H. Turner,** Outreach and Liaison Librarian and Evening Supervisor, Health Sciences Libraries; **Lisl Zach,** Assistant Professor, College of Information Science and Technology; **Linda M. G. Katz, AHIP,** Associate Director, Health Sciences Libraries; Drexel University, Philadelphia, PA
Objectives: A multidisciplinary partnership of librarians, health professionals, and library and information science faculty collaborated to encourage health information seeking by medically underserved patients at an urban health center. The objectives of the program were to (1) gain greater insight into the information behaviors of these patients and (2) test the effectiveness of sending tailored text messages to participants in group prenatal classes.
Methods: The target population was patients at a federally qualified health center serving primarily African American low income patients. The center offers a broad spectrum of health promotional services but has not provided customized information to its patients. Based on earlier work with this population, we posited that text messages would appeal to patients and would increase their engagement with authoritative health resources, especially when delivered in the context of a "teachable moment," such as pregnancy. With support from the National Network of Libraries of Medicine, health sciences librarians identified educationally and culturally appropriate web resources, which were linked to text messages sent to participants' phones. In addition, informal group instruction and focus groups were conducted to investigate current information-seeking behavior. Health literacy levels were measured at the outset, and a monthly survey was used to track reactions.
Results: Monthly and end-of-project surveys of participants indicated that women found the messages useful, interesting, and relevant to their situations. Health care providers reported that the women seemed excited about getting the messages. Participants in the training sessions and focus groups were enthusiastic about being able to find health information online. Most were aware that it can be risky to trust information found on web but were not aware of more reliable sources. Through continual interaction, the collaborative partners gained insight into the community and its information needs and behaviors.
Conclusions: Although Internet access among this population was similar to national averages, use of the Internet to access health information was low. Tailored text messages appear to provide a convenient on-ramp for health information seeking among these patients at an urban health center. There are challenges associated with outreach to this population, which include: Frequent changes in cell phone providers and numbers make consistent contact by text message challenging over time; follow up with participants may be difficult; and research in a clinical setting requires sensitivity to constraints of that environment.

2:21 p.m.
Project SHARE: Empowering Student Community Health Advocates
Anna Tatro, Liaison and Outreach Services Librarian; **M.J. Tooey, AHIP, FMLA,** Associate Vice President, Academic Affairs and, Executive Director; **Alexa Mayo, AHIP,** Associate Director, Services; Health Sciences and Human Services Library, University of Maryland–Baltimore
Objectives: This paper describes the implementation of Student Health Advocates Redefining Empowerment (SHARE), a 3-year, $205,000 project funded by a National Library of Medicine (NLM) Information Resource Grant to Reduce Health Disparities. Through a partnership between the library and a nearby high school for the health professions, selected students develop skills to advocate for better health at the personal, family, and community level.
Methods: Work on Project SHARE began in March 2011. In the project's first phase, students build capacity/skills by participating in weekly training sessions to become community health advocates. This takes place in seventeen weeks during the academic year. In its second phase, for six weeks over the summer, students learn through experience as they plan and lead health outreach events in communities throughout the city. To incentivize participation, students are paid interns in the program. This paper reports on program visioning, planning, and implementation: building successful partnerships with school administrators and parents; student recruitment; staffing and evaluating the program; and developing a seventeen-week health advocacy curriculum aligned with national standards such as Healthy People 2020, National Health Education Standards, and National Partnership for Action to End Health Disparities. The curriculum can be used as a model by community-academic partnerships nationwide.
Results: Effective communication between stakeholders has played a key role in this project. A flexible, interactive, student-driven curriculum engages students in the program. All students accepted into the program remain committed and enthusiastic. In August 2012, the first cohort will have completed the 154 hour program. At that time, the efficacy of the curriculum, based on the results of a web-based pretest and posttest will be analyzed and reported.

2:37 p.m.
Extending Our Reach: Using Social Media to Engage Family Caregivers Online
Jamie E. Peacock, Outreach Librarian, National Library of Medicine, Bethesda, MD
Objectives:
1. Explore social media as a viable tool for engaging family caregivers, an underserved population.

2. Increase awareness of quality health resources among caregivers who already use online health information and social media tools.
3. Identify the types of health information most beneficial to individuals and groups in caregiving roles and networks.
Methods: Family caregivers must often act as health care decision-making surrogates for a loved one, making them a natural target population for our library's resources. Recognizing that these caregivers regularly look outside themselves for health information, we expanded our target audience to also include groups supporting family caregivers and individuals who act as health information gatekeepers for their social network. After much research, we established Facebook and Twitter accounts to learn more about existing family caregiver communities. We use these tools to follow family caregiving associations and groups, monitoring for keywords, hashtags, and topics relevant to family caregivers and their networks. We engage these populations by "liking" their posts, commenting, retweeting, and responding. When appropriate we answer questions, citing our library's resources to raise awareness. We have also developed a workflow for engagement and continuously review various metrics to analyze our success.
Results: This is an ongoing study, but when completed our measures of success will include:
• number of followers of our Facebook page and Twitter feed.
• number of engagement opportunities explored.
• feedback from the family caregiver community on our social media efforts
• overall growth of our outreach via social media
• statistics of use provided by Hootsuite, Facebook Insights, and mentions

2:53 p.m.
Bringing School Librarians to the Game: Promoting Reliable Online Health Information through School Librarians
Kimberly A. Pullen, Head, Liaison Section Program; **Betty Tucker, AHIP,** Head, Collection Management; Medical Library, Louisiana State University Health Sciences Center–Shreveport
Objectives: The goal of this project was to create and organize a promotional campaign publicizing reliable online health information resources for school librarians. As an incentive to promote these resources to students, school librarians were given an opportunity to apply for a $500.00 award. This paper will describe how the awards were created, funded, and publicized.
Methods: School librarians participated in educational sessions to learn about valid, up-to-date consumer health information resources. A promotional campaign publicized the 4 "Linkout for Health" Awards, which were $500.00 competitive awards for school librarians. These awards were created to honor the best promotional ideas for encouraging students to seek reliable online health information from sources like healthelinks, MedlinePlus, and the National Library of Medicine databases. Each applicant submitted an award application describing the details of the proposed project, including a timeline and budget. After a specified time period, the applicants were judged, and the awards were presented to the 4 winning school librarians to fund their proposed projects. These projects were also publicized to increase awareness of consumer health information on the web.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

3:09 p.m.
A New Approach to Community Engagement: Focused Health Information Outreach
Javier Crespo, Associate Director; **Michelle L. Eberle, AHIP,** Consumer Health Information Coordinator; National Network of Libraries of Medicine, New England Region, Medical School, University of Massachusetts–Shrewsbury
Objectives: The purpose of the project was to increase health information literacy and access to accurate and reliable health information in two distinct communities experiencing health disparities: Providence, RI, a predominantly Latino community, and western Maine, a predominantly rural community, and to collect formative and summative evaluation data to improve the model for future use.
Methods: A community assessment was conducted to identify community health information needs and supports and to gather feedback on how best to tailor efforts. Ten key informants were interviewed in Providence, nine in western Maine. Data were coded and organized into themes. Findings led to the following changes to health information outreach efforts consisting of service provider trainings, community trainings, and distribution of materials. In western Maine, we tailored efforts to focus on seniors and worked with public health coalitions to raise awareness and use of NIHSeniorHealth.gov among seniors and service providers. We worked with public schools, adult education programs, and public libraries to support access to computers and opportunities for training and support. In Providence, we worked with an adult education program to develop a train-the-trainer model for foreign trained health professionals. Our project was featured on Latino Public Radio.
Results: The evaluation included outcome and process assessments. Pre- and post-evaluations were collected immediately before and after trainings to assess knowledge gain and use of resources. A follow-up survey was sent out via email two months later to assess whether participants used what they learned or shared with others. The National Network of Libraries of Medicine, New England Region (NN/LM NER), maintained an implementation table and process map to keep detailed notes on what worked and what did not. Upon completion of the project, community partners participated in a community partner evaluation interview to provide feedback from their perspectives.
Conclusions: In terms of the process, we learned that an initial community assessment effort is critical to tailoring health information outreach to meet the needs of underserved communities. Working with community organizations enabled NN/LM NER to achieve its health information outreach goals to increase confidence, knowledge, and use of MedlinePlus in Providence, RI, and the Western Maine Health District . The approach provides a much needed understanding of how best to meet the health information literacy needs of two distinct communities experiencing health disparities.

Collection Development Section

Sustaining Library Collections to Ensure a Home Run

Cosponsored by Technical Services Section

WSCC, Room 612, Level Six

2:05 p.m.

How Consortial and Other Shared E-Book Patron-Driven Acquisitions Plans Are Contributing Significant Content to Support Research, Coursework, and Distance Learning at the University of Florida's Health Science Library

Steven B. Carrico, Acquisitions Librarian, George A. Smathers Libraries; **Cecilia E. Botero,** Associate Dean, George A. Smathers Libraries, and Director, Health Science Center Libraries; University of Florida–Gainesville

Objectives: Purpose: This presentation will provide summary information on one previous e-book patron-driven acquisitions (PDA) project conducted by the University of Florida's Main Library and the Health Science Center Library (HSCL), but also two ongoing consortial and shared e-book PDAs, with the focus on the wealth of content that is being acquired for HSCL users as the result of these e-book partnerships.

Methods: Setting/Participants/Resources: The HSCL at the University of Florida supports the research and educational missions of six colleges (medicine, dentistry, nursing, pharmacy, public health and health professions, veterinary medicine) and has a user base located in its satellite library located in Jacksonville, FL. Evaluation Method: Using Library of Congress (LC) and Medical Subject Headings (MeSH) call number and subject heading ranges, e-books can be categorized by discipline and college; and cost per book and usage can then determine how effective the PDAs have been in supporting the mission of HSCL and its users.

Results: Results/Outcome: Our results are incomplete as of yet; however, expected results will show the number of e-books made available or purchased via the three PDAs, HSCL e-books usage by subject disciplines, total cost to the HSCL materials budget, price per HSCL e-book, and cost per use.

Conclusions: Health science libraries frequently experience a difficult time getting publishers in the medical/health sciences fields, thus e-book aggregators, to offer cost-effective PDA plans with content exclusively for their users. Thus, to acquire e-book access with medical and health sciences content for their specific users, health science libraries often have to collaborate with the main libraries at their institutions to launch PDAs. From our experiences working with shared e-book plans, we have found that various PDA models can offer significant e-book content for health science library users.

2:25 p.m.

Determining Your Lineup Card: Implementing a Demand-Driven Acquisition Program within a Large Academic Institution

Nicole R. Theis-Mahon, Head, Collection Development and Acquisitions, Bio-Medical Library; **Katherine V. Chew,** Associate Director, Research, Collections, and Access Services, Health Sciences Libraries; University of Minnesota–Minneapolis

Objectives: When creating your lineup card, it is crucial to have the best players for that particular game, but since you are limited to your active roster you need to organize your players to their strengths. Implementing a demand-driven acquisitions program is similar to creating a lineup card that will win the game.

Methods: The health sciences libraries were invited to participate in a demand-driven acquisitions (DDA) program within the larger structure of the University of Minnesota Libraries. This presented both opportunities and challenges in scoping the DDA candidate pool to meet the needs of all the various subject areas and user communities on campus. Starting with our previously established approval and slip plan profiles, other criteria were added to the mix—including publisher information, date of publication, price cap, subjects, and content level—to create the initial DDA title pool as well as scope future DDA candidates. It was hoped that this preliminary work would result in a steady stream of DDA candidates that would be relevant to health sciences users and the other user communities served by the University of Minnesota Libraries.

Results: The initial list of DDA candidates, based on the above criteria, included very few health sciences titles. However, as the program continued health sciences titles that met these criteria were added to the DDA candidate pool. There has been a slow but steady increase in the number of DDA titles acquired since August 2011, this was largely in part to the new purchase parameters that were set up in this program.

Conclusions: This long-lasting DDA program is one that the library can budget for and sustain over several months. Given the successful experience with the 2011 program, it is possible that the University of Minnesota Libraries, including the health sciences libraries, will continue to have a DDA program as a supplement to the traditional selection model.

2:45 p.m.

Covering the Bases: A Unique Patron Driven Acquisition Project to Evaluate Current Collection Practices

Trish Chatterley, Public Services Librarian, John W. Scott Health Sciences Library, University of Alberta–Edmonton, Canada

Objectives: The University of Alberta Libraries undertook a creative patron-driven acquisition project in order to more fully meet user needs as well as to evaluate current collection development procedures. The project is unique in that it involved on-demand purchase of both print and electronic titles, and the title selection pool included books previously passed over for purchase by subject selectors.

Methods: Our university library system receives monographs automatically through approval plans for various population groups and supplements this ordering through additional individual title selection by liaison librarians in various subject disciplines. Given finite budgets and established selection criteria, many titles are not purchased via either route but may be desired by our clientele. Temporary records were loaded into the library catalog for titles for which slip notifications had been received but had not been purchased. Clients viewing the records could click an embedded link to trigger the purchase of the item. Orders will be reviewed to identify patterns related to ordering client group, subject area, format preferences, etc. Results will be used to identify gaps in our collections, assess current selection practices, and make modifications to procedures as necessary. The benefits and challenges associated with such projects will be discussed.

Results: Approximately 10,000 temporary records, including

about 2,500 e-book records, have been loaded into the library catalog. The project is ongoing, but at the 2 and 1/2 month mark, over 300 books have been purchased across a range of subject areas at an approximate cost of $30,000. Seventy-two of those purchases (about 23%) were for e-books. An additional 52 e-book titles were viewed briefly, but a purchase was not triggered in the hosting platform. For this reason, and because of duplicate requests for the same title, more requests for purchase have been received than titles have been ordered. Almost 40% of the requests placed were for electronic materials. Approximately 40% of the orders were placed by graduate students, 40% by undergraduate students, and 10% each by faculty and staff. Over 100 of the titles were classified as textbooks, which our library does not actively collect in all subject areas. Once the full data set has been collected, we will analyze the results further for purchase patterns with regards to subject areas, publishers, content levels, and formats.

Conclusions: Preliminary results seem to indicate that our approval plans are functioning adequately. Many requests were for formats such as textbooks that we do not purchase systematically, though there is an obvious desire for this type of material; that policy may need to be revisited. While only 25% of the project records in the catalogue were for e-books, 40% of our requests for purchase were for e-books, which suggests a preference for electronic format. This may simply reflect the speed with which users could expect to access the material, since our patrons were advised that there would be a significant delay before print materials would be delivered. Given the high number of requests for print materials however, consideration should be given by libraries to print-based patron-driven acquisitions projects.

3:05 p.m.

Keeping Score: Assessing the Value of Electronic Resources in Faculty Research

Leslie Williams, Acquisitions Librarian, Health Sciences Library, University of Colorado Anschutz Medical Campus–Aurora; **Denise Pan,** Assistant Professor and Electronic Collections and Assessment Librarian; **Gabrielle Wiersma,** Electronic Collections and Assessment Librarian; **Yem Fong,** Professor and Director, Collection Development; University Libraries, University of Colorado–Boulder

Objectives: The purpose of this pilot study is to analyze the extent to which electronic resources, provided by the library, contribute to faculty research outcomes by developing a new cost benefit model. Libraries can use cost benefit models to provide evidence of value and demonstrate the library's contribution to university priorities.

Methods: One medical and two academic libraries in a university system participated in this case study. Quantitative and qualitative methodologies were used, including faculty interviews and citation analysis. During the interviews, researchers described the study, requested a copy of the faculty member's curriculum vitae and syllabi, and asked questions about the use of library resources. Researchers conducted citation analysis on articles cited in the references list of faculty publications from 2009 and 2010. They determined the source of full-text access for each citation and calculated the percentage from online library resources. Using interviews, citations analysis, and cost estimates, researchers calculated a cost benefit analysis (CBA) and return on investment (ROI). In the current economic climate, these models demonstrate the value of funding library materials and will inform decisions about pay-per-view models.

Results: The medical library focused on faculty in the physical therapy program. CBA is the ratio representing dollar value of benefits gained for dollar value of costs. CBA was calculated by dividing the estimated article purchase price by journal subscription costs. The medical library experienced a CBA of $0.76 in 2009 and $0.72 in 2010. ROI shows the increase in value on dollars spent to achieve a benefit. ROI was calculated using a formula: benefits minus costs divided by costs and multiplied by 100. The medical library's ROI was -24.4% in 2009 and -27.8% in 2010.

Conclusions: This pilot study created and tested a model to calculate CBA and ROI in research libraries. In comparison to two other academic libraries, the medical library experienced dramatically different results. Higher subscription costs and divergent faculty research practices are two potential factors that produced the negative return. More research and analysis is needed to interpret the medical library's results; however, many lessons were learned from the pilot. In conjunction with other metrics, the model could be used to assess the usage and awareness of library resources. It could also inform decisions about alternative acquisitions and access models like pay-per-view.

Educational Media and Technologies Section

Loading the Bases: Teaching with Technology and Multimedia

Cosponsored by Medical Informatics Section, Complementary and Alternative Medicine SIG, Libraries in Curriculum SIG, Osteopathic Libraries SIG, Outreach SIG

WSCC, Room 619/620, Level Six

2:05 p.m.

Windup and the Pitch: Delivering Instruction Using Videos

Carol Shannon, Liaison and Information Services Librarian, Taubman Health Sciences Library; **Nadia Lalla,** Coordinator, Collections and Information Services; **Anne Perorazio,** Information Resources Reference Specialist, Taubman Health Sciences Library; University of Michigan–Ann Arbor

Objectives: Our users include students, clinicians, researchers, and support staff in five professional health sciences schools as well as a large academic medical center and the general public. We want to provide instruction to them at their point of need, 24/7/365. Online video tutorials are an efficient and effective answer.

Methods: We began by conducting an environmental scan of existing online tutorials and the programs and tools used to create them. Through analysis of the content and techniques used in those videos, we developed our own standards for in-house production. In addition, we adapted our videos to display on handheld devices. Content includes instruction on citation analysis, effective database searching, and consumer health. Because we collect and analyze usage statistics, we have developed a formal assessment process for the evaluation of this method of instruction.

Results: We have produced a variety of online videos using screencasting and video editing software to reach our diverse audiences. These are available on YouTube, embedded in LibGuides,

and accessible on institutional websites. We have developed multiple styles of videos and production methods for different audiences including varying qualities of production, length, presence of music or call outs, distribution, and marketing efforts. We have become proficient at the mechanics of video production and developed best practices to optimize the viewing experience.
Conclusions: Our assessment demonstrates that online video tutorials are an effective means of providing instruction to diverse audiences.

2:25 p.m.
Cracker Jack Instruction: Creating, Implementing and Managing a No-Budget Online Continuing Education Course
Maureen M. Knapp, AHIP, Assistant Librarian/Assistant Professor, John Ische Library, Louisiana State University Health Sciences Center–New Orleans; **Amy Blevins,** Clinical Education Librarian, Hardin Library for the Health Sciences, University of Iowa–Iowa City; **Jaime Blanck, AHIP,** Clinical Informationist, Welch Medical Library, Johns Hopkins University, Baltimore, MD; **Wayne Loftus, AHIP,** Web Services Coordinator, Health Sciences Libraries, University of Minnesota–Minneapolis; **Melissa Rethlefsen, AHIP,** Education Technology Librarian, Mayo Clinic Libraries, Mayo Clinic, Rochester, MN; **Luke Rosenberger,** Director, Library Technology and Historical Collections, UT Health Science Center Libraries, University of Texas Health Science Center–San Antonio; **Suzanne Shurtz, AHIP,** Assistant Professor/Instructional Services Librarian, Medical Sciences Library, Texas A&M University–College Station; **Julie K. Gaines,** Head, Medical Partnership Library, GHSU/University of Georgia Medical Partnership Campus Library, Georgia Health Sciences University–Athens
Objectives: In baseball, "cracker jack" refers to a player or team with power and exceptional skill. This case study on course creation will discuss the coordination, implementation, and assessment of the 2011 "Get Mobilized!" online continuing education (CE) course, which harnessed the skills of eight instructors to bring a free, web-based class on mobile resources to over eighty MLA members.
Methods: Topics will include: coordination (identifying educational needs, collaborators, funding sources, course design); implementation (content creation, project management, online tools, promotion); and assessment (engaging higher level learning, course completion statistics).
Results: Out of 500 registrants, 83 members completed the course, with overwhelmingly good evaluations. Positive observations included course design (i.e., using workbooks to engage the learner and encourage reflections in their own work) and time management (i.e., offering "catch up weeks" to work with busy professional schedules). Things to improve included communication (an email reminder system would have upped course completion numbers).
Conclusions: Cost-effective CE is an important aspect of professional development in these difficult economic times. Benefits, challenges, lessons learned, and future directions for online learning opportunities among MLA members will be discussed, in addition to an update about the spring 2012 cohort.

2:45 p.m.
Blended Learning in Action: Custom Designing an Extensible Online Tutorial to Enhance Interactive Classroom Content in a Medical Decision Making Course
James Brucker, Instructional Design Librarian; **Stephanie C. Kerns,** Head, Education and Outreach, and Curriculum Librarian; **Pamela Shaw,** Biosciences and Bioinformatics Librarian; **Linda O'Dwyer,** Communications Coordinator and Education Librarian; Galter Health Sciences Library, Northwestern University, Chicago, IL
Objectives: According to feedback from medical students and faculty, the introductory "Medical Decision Making I" (MDM) class, offered in conjunction with the library, needed more hands-on, interactive content. A blended learning approach of a customized, immersive, highly interactive tutorial, with case-based exercise results that integrated throughout the synchronous class, could enhance student engagement both online and in the classroom.
Methods: Leveraging MySQL, server-side scripting, and jQuery, the library built a reusable, extensible tutorial system, focused on challenging students to work through a variety of clinical scenarios to solve information literacy issues, framing answerable research questions. Instead of presenting mainly static, lecture-based content, the tutorial used fluid, interactive feedback, rapidly progressing through several real-world clinical cases. Cases were researched and developed by librarians and could be reused and modified for other tutorials. Several open exercises provided the framework for students to build their own focused research questions. Subsequently, the synchronous class was interactive from the start, continuing the tutorial-generated research in an open forum of discussion and group work, the essence of blended learning. This was piloted with a summer physician assistant program, then, using a built-in feedback system, quickly enhanced for the fall MDM course.
Results and Conclusions: The majority of the development time was split between the technical tasks of creating a rich interactive application and the instructional design component of fully developing each case-based scenario. The librarian skills used to develop the cases could be applied to alternative, nonelectronic approaches, depending on the technical resources available to any given library. The fall MDM course involved a large group of simultaneous users, and there were some in-class technical issues as the students attempted to access their tutorial-generated information, due to either server load or intermittent wireless access. In the future, the information necessary for the in-class component should be retained in some redundant format, avoiding possible technical breakdowns of the in-class experience. The tutorial included an integrated feedback system that was initially added to measure only the pilot projects. Student feedback was nearly 100%, proving that this feedback system could remain in place without hindering the overall user experience. The feedback related only to the tutorial but could be expanded to include elements of the class, particularly if the students are expected to return to the tutorial later for post-class assessment.

3:05 p.m.
Presentation Excellence: Moving Beyond PowerPoint
Bill McGann, Principal, McGann Communications, Vancouver, WA
Objectives: In the medical arena, many of us are called upon to endure PowerPoint presentations that are so mind numbing, we are surprised we can survive them. It has become commonplace to mock the traditional PowerPoint presentation model. What is striking, however, is that awareness of the pain caused by these

shows has not resulted in significant changes in how presentations are given.
Methods: This talk will briefly review new presentation approaches that significantly increase presenter effectiveness, audience engagement, and information retention. In addition to a discussion of essential steps for creating a focused message, we will incorporate a demonstration of the pecha kucha model: 20 slides, shown for exactly 20 seconds each, for a total time of 6 minutes, 40 seconds. Attendees will gain an understanding of a framework for improving their own talks as well as the presentations that they help design for others.

International Cooperation Section

Stepping Out of the Box: Librarians Working in Unconventional Roles and Places in Support of Global Health

Cosponsored by Public Health/Health Administration Section, Library Marketing SIG

WSCC, Room 602/603, Level Six

2:05 p.m.
Global Health Partnerships in Medical Education: A View from the Wards, Boardroom, Director's Office, and Teaching Lab
Lauren Maggio, Director, Research and Instruction, Lane Medical Library and Knowledge Management Center, Stanford University, Stanford, CA; **Megan von Isenburg, AHIP,** Associate Director, Research and Education Services, Medical Center Library & Archives, Duke University, Durham, NC
Objectives: To describe how two libraries are partnering with African colleagues to promote and support information access and information literacy training in sub-Saharan Africa. These partnerships stem from the Medical Education Partnership Initiative (MEPI), funded by the National Institutes of Health (NIH), and provide unique opportunities and challenges that have pushed these librarians to operate outside of the familiar library walls.
Methods: In 2010, NIH awarded 13 sub-Saharan medical schools and their US and European partners $130 million to design, implement, and evaluate programs to bolster the numbers of African health care workers, support medical education and promote research in sub-Saharan Africa. Librarians are natural partners in these goals. Two librarians at MEPI partner institutions will report on activities that have taken them beyond US borders and into a variety of settings. At one institution, a librarian has rounded with clinical teams, negotiated alongside partner librarians for curricular time, and taught information literacy sessions. The other librarian has co-conducted an evaluation of the partner library and led on-site PubMed and HINARI trainings. The librarians will candidly discuss their experiences, share lessons learned, provide examples of global opportunities. and encourage colleagues to create synergies with colleagues within and beyond MEPI institutions.

2:25 p.m.
Going Way out of the Box: From Tennessee to South Africa
Cynthia J. Vaughn, AHIP, Clinical Information Librarian and Assistant Professor; **Martha F. Earl, AHIP,** Assistant Director; Preston Medical Library, University of Tennessee–Knoxville
Objectives: As a result of a panel presentation at the American Library Association (ALA) meeting in 2011, two Tennessee librarians will be teaching train-the-trainer classes to public librarians in South Africa for two weeks in 2012. Intensive project planning will include a needs assessment, course design, evaluation, and follow-up support.
Methods: The consumer health classes taught in rural Tennessee helped public librarians and library staff to obtain their Consumer Health Information Specialization from MLA. Librarians with the US Embassy in South Africa will conduct the needs assessment to determine which classes have the highest priority for the librarians and library staff. They will also determine the cities included in outreach to provide effective coverage of the entire country. The classes in South Africa will likely be similar in nature (consumer health focus) depending on the needs assessment. The Tennessee librarians will educate themselves on South African culture, norms, and health trends. Pre- and post-tests will be used to measure content learned, and follow-up surveys via email will complete the evaluation of this project.
Results and Conclusions: As this trip will happen in March 2012, results conclusions will be presented at the meeting.

2:45 p.m.
Strengthening Research Capacity and Addressing Global Health Challenges: A Librarian's Perspective
Gurpreet Rana, Global Health Coordinator, Taubman Health Sciences Library, University of Michigan–Ann Arbor
Objectives: In 2011, fourteen Ghanaian scholars were selected for a four-month post-doctoral fellowship at a US university to strengthen interdisciplinary research capacity and address facets of global health in Ghana. Partnering in this objective, the global health librarian created team-based instructional interventions to enhance fellows' information-seeking skills and focus upon the significance of information literacy in addressing global health challenges.
Methods: This paper presents the implementation of a foundational information skills curriculum for Ghanaian postdoctoral scholars. The information skills curriculum was integrated into the interdisciplinary fellowship program to sustain the scholars' goals in developing creative solutions in global health and to improve information literacy. Successful navigation of information resources and building fellows' confidence as information seekers were major aspects in the fellows' research component, for both present and future endeavors. The fellows were divided into four domain-specific research teams addressing issues relevant to sub-Saharan Africa. Librarian-led interventions included didactic lecture combined with hands-on computer sessions, small group instruction for interdisciplinary teams, and domain-specific research consultations. Attention will be given to connections with future scholars and further development of curricula in strengthening research capacity in developing countries.

3:05 p.m.
Strengthening Medical Library Services in Ethiopia: An International Collaboration
Sandra A. Kendall, Director, Library Services, Mount Sinai Hospital, Toronto, ON, Canada
Objectives: The strengthening of modern library sciences at the Addis Ababa University (AAU) College of Health Sciences is essential to successfully support the expansion of medical spe-

cialists, master's, and doctoral (MD and PhD) graduate training programs. This program for clinical medical librarians will build capacity in library literacy skills, including the accessing of up-to-date information with foundational knowledge of appraising the evolving literature in evidence-based medicine (EBM).
Methods: The Ethiopian government aims to train 5,000 specialist MDs and PhDs and 10,000 master's graduates by 2018. Initiated in 2008, the Toronto Addis Ababa Academic Collaboration (TAAAC) assists co-build capacity and sustainability in graduate programming at AAU. TAAAC oversees and supports 16 educational partnerships between AAU in 5 faculties in the University of Toronto (UofT). The implementation of the TAAAC-Library Services Program (TAAAC-LSP) partnership has resulted in distance learning and the provision of printed materials, texts, and Internet accessible resources. Library sciences knowledge infrastructure and resources have been enhanced and expanded and now include free access to the UofT library system (Ptolemy) for faculty. UofT medical librarians will provide additional face-to-face training at AAU over a series of training visits starting in 2011 to reinforce and sustain newly acquired medical library skills through an interprofessional exchange.
Results: Distance learning and frequent electronic communication, together with UofT TAAAC faculty who provide in-country training to AAU health science students in critical thinking skills and EBM methods, strengthens the ongoing educational relationships which in turn facilitates the acquisition of modern library science training throughout the system. Medical librarians at UofT have a valuable role in supporting and assisting the learning of Ethiopian librarians in medical library sciences, and they benefit from a wider understanding and experience of knowledge translation skills. Together, librarians from both contexts work to assist codevelop a modern medical library system through AAU health care students.
Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

Leadership and Management Section

Where Have You Gone, Joe DiMaggio? Turning Losses into Opportunities

Cosponsored by Veterinary Medical Libraries Section, Medical Library Education Section

WSCC, Room 606/607, Level Six

2:05 p.m.
Shortstop to First to Third: Collaborating to Access Digital Collections for Biomedical Natural Language Processing (BNLP) Research
Leslie Williams, Acquisitions Librarian, Health Sciences Library; **Lynne M. Fox, AHIP,** Education Librarian, Health Sciences Library; **Christophe Roeder,** Senior Research Assistant/Associate, Barbara Davis Center for Diabetes; **Lawrence Hunter,** Professor, Pharmacology, Preventive Medicine, Biometrics and Biology, and Computer Science; University of Colorado Anschutz Medical Campus–Aurora
Objectives: Our goal is to leverage the library's journal licenses to obtain data (extensible markup language [XML] journal content) for grant-funded research in developing biomedical natural language processing (BNLP) tools. Collaboration between librarians, researchers, and publishers resulted in a framework that will inform future acquisitions.
Methods: This case study examines three attempts to leverage the library's journal licenses to obtain a large collection of content for research purposes. First, researchers attempted to obtain content directly from PubMed Central (PMC). This attempt failed due to limits on use of content in PMC. Second, researchers and their library liaison attempted to obtain content from contacts in the technical divisions of the publishing industry. This resulted in an incomplete research data set. Finally, researchers, the library liaison to the lab, and the acquisitions librarian collaborated with publishers' sales and technical staff to successfully create a method for obtaining content as an extension of the library's normal acquisition process for electronic content. This allowed the researchers and librarians to develop a strategy for acquisition of XML material from lessons learned that could be replicated at other institutions.
Results: An unexpected partnership between an acquisitions librarian, a liaison librarian, researchers and a major science, technology, medicine (STM) vendor resulted in the creation of a framework to purchase data (XML journal content) to further research projects in biomedical natural language processing tools. The model adapted the library's typical acquisitions process for electronic content to fit the needs of the research lab. The group collaborated to negotiate per-article pricing, develop a license agreement to fit the situation, establish data elements to identify full-text scholarly articles, and devise a strategy for testing the transmission and filtering of content to meet the predefined parameters.
Conclusions: Forging a partnership between a library, a research lab, and a major STM vendor requires flexibility, patience, and persistence. The experience strengthened the existing relationship between the library and the research lab and demonstrated the library's willingness and ability to support faculty research in a nontraditional method. The model framework can be replicated by any institution seeking to acquire data (XML journal content). Library consortia are encouraged to explore the opportunity for group purchases of data for their member institutions.

2:21 p.m.
"Keep Calm and Carry on": The Perilous Process of Finding and Implementing a Federated Search Tool
Ann Glusker, AHIP, Medical Librarian; **Elisa Hoelscher,** Senior Web Developer; Medical Library, Group Health Cooperative, Seattle, WA
Objectives: To outline the process and learning outcomes of a large health cooperative's two-year process to find an appropriate federated search tool, including (1) the three important barriers that emerged during development and led to the termination of a vendor contract after substantial investment, and (2) the final successful implementation.
Methods: Background: When the vendor providing our successful federated search tool (Company A) was bought out, our organization chose Company B as its new provider. Company B was already working with our intranet team, and by selecting them there would be cost-savings and a consistent user interface. Two teams began meeting: on our organization's side, the team collaboration included the medical library, web services, and the system integration group, and on the vendor side, it included

sales and tech representatives. Regular progress meetings were held as the tool was being developed. It became clear early on that there were problems with some of the basic assumptions of the contract and eventually three sets of barriers emerged. After substantial investment of time and money, the contract was ended and the medical library alone worked to implement a tool with Company C.

Results: Three important barriers emerged in the course of development. First, our organizational staff capacity was not adequate for the development work needed. Second, the vendor's expertise and experience were not adequate for the type of tool needed. Both of these miscalculations came about due to the unexpected (by all but the library staff) complexity of library tools. Third, there were too many collaborators, and the process became unwieldy and the medical library's needs obscured. In the end, the parting was amicable and the medical library went with Company C, a vendor with expertise and experience in working with libraries.

Conclusions: In addition to avoiding the pitfalls already mentioned, this project raises larger questions; What is a library tool, and how should that be presented to potential collaborators? Under which circumstances is collaboration detrimental versus beneficial? What are the pluses and minuses of offering users a federated search tool?

2:37 p.m.

Before We Change the Game: The Sense-Making Practices of Hospital Librarians

Carol L. Perryman, Assistant Professor, School of Library and Information Studies, Texas Woman's University–Denton

Objectives: The questions addressed by this study were as follows:

• How do hospital librarians characterize "gaps" in sense-making as they engage in their work?

• How do hospital librarians characterize the role of organizational structures in their sense-making processes while engaged in their work?

• Does the sense-making methodology offer a means for insight into the sense-making behaviors of hospital librarians?

Methods: In contrast to hopeful predictions that medical libraries will continue to be heavily used, leaders in the profession agree that hospital libraries are at a critical juncture and call for professionals to be prepared to retool library spaces and redefine practice. Despite prescriptions for change, little is known about the worlds of hospital librarians. Theories of individual sense-making defined by Brenda Dervin and the organizational, contextualized perspective of Carl Weick were used to conduct retrospective, semi-structured interviews with twenty-two hospital librarians to learn more about their thought processes in recognizing and negotiating barriers. Dervin's initial categories were expanded during analysis to gain understanding of hospital librarians from their own narratives.

Results: From this research, I have found that the hospital librarians who shared their narratives make sense of their situations through the lens of their place within the organization and that their feelings of affiliation and stability are vitally important to this process. With the confidence of security, hospital librarians are active participants and contributors to the hospital community. The methods and models provided by both Dervin and Weick add important perspectives to making sense of hospital librarians' sense-making.

Conclusions: The study's findings suggest that library education and continuing education must support this population in their struggles and that asking questions about librarians' own sense-making practices is a worthwhile pursuit that will help to build that support on solid understanding rather than on speculation and potentially maladapted models borrowed from other professions. While it may be common knowledge that librarians need to be flexible in their work roles, the situations described by study participants may demonstrate the importance of self-directed education or skills enhancement in areas that are not limited to traditional librarian roles.

2:53 p.m.

Working through a Slump with Retraining and a Clear Game Plan

T. Derek Halling, Onsite Services Librarian, Medical Sciences Library, Texas A&M University–College Station

Objectives: To create a new library service model with a focus on improving frontline expertise, increasing behind the scenes efficiency for the staff and student assistants, and maintain morale during a period that includes leadership change and a mandatory 25% reduction of student workforce hours.

Methods: Implementation of a Disney-type service model was chosen. Through observation, skill sets most common to the success of different library client services positions were identified and used as a guide for department reorganization. Full-time staff members were selected to be responsible for hiring and training student assistants in the duties that were aligned to the two separate skill sets of OnStage and OffStage. Hiring methods targeted candidates who would best fit each of the groups with coverage determined by the changing needs of the library. Scheduling adjustments were also implemented for full-time staff that allowed interdepartmental collaborative efforts on several long-term projects.

Results: Patrons and staff alike noticed an immediate difference in the style of service that resulted from the changes. Scores in categories of service increased, and the relationships between staff and patrons were greatly improved. The new methods also created an improvement in the reliability and professionalism of student assistants. Scheduling problems that had typically been a problem were minimized due to the eagerness of employees to be rewarded with specific schedules. The expertise of all roles were increased, which allowed for an expansion of services and higher quality of output which resulted in more employee awards being distributed than any time in recent history.

Conclusions: The implementation of the new service model positively impacted the ability of the library to become more efficient during a time of economic hardship. Several services were improved due to the dedication of select personnel specifically placed in positions to succeed, rather than being expected to provide a high level of service with little exposure to the task. Expertise and flexibility now enable immediate changes to take place with assurance of continuity regardless of staffing.

3:09 p.m.

Around the Horn: How the University of Florida Successfully Fielded a Team that Integrates Health Sciences and University Libraries

Michele Tennant, AHIP, Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute;

Cecilia E. Botero, Associate Dean, George A. Smathers Libraries, and Director, Health Science Center Libraries; **Brian W. Keith,** Assistant Dean, George A. Smathers Libraries; University of Florida–Gainesville
Objectives: Discussion of potential academic health center library mergers with main campus libraries often precipitates fears of loss: loss of autonomy, power, standing, identity, and/or resources. This presentation describes a recent integration in which both health center and main libraries emerged stronger and discusses how these entities positioned themselves to snatch victory from the jaws of perceived defeat.
Methods: Integration of the health center libraries and the main libraries took place in 2009, following a directive by the university's president. The libraries followed a model described in the university's Future of the Libraries Report: "the libraries...integrate their budgets and reporting structures...[while] the health center library retains autonomy to serve the needs of its clients." Although the two entities had collaborated for years in collection development and tenure/promotion, in other areas the systems were separate with little knowledge of each other. To prepare for integration, there was a long period of planning by administrators, and staff members from both entities were enlisted to several working groups related to services and internal operations. The final plan addressed integration, funding, renovation, and accreditation. The implementation and maintenance of the integrated system were challenging but yielded numerous lessons learned.
Results: Success is possible with planning and communication. Integration can address historic issues, inequities, and inefficiencies and can allow leveraging of resources. The initial focus is on just achieving a functional integration, but true cooperation and opportunities may take time. The head of the integrated system is positioned to serve as champion for the health libraries and integration may actually improve the standing of the libraries in the health center.
Conclusions: Move on and implement to the best advantage of the libraries: patrons and staff are what matters and will suffer if leaders are not invested in a successful outcome. Trust must be developed through tact, honesty, and effectiveness. Be candid about potential disadvantages to both units and the advantages and celebrate progress towards these. Clarify the scope of authority and consider maintaining distinguishable resources and services. Communicate that the health center is still the health library's primary focus. Periodically assess the integration and results.

Nursing and Allied Health Resources Section

Libraryless in Seattle: Outreach to the Resource-Poor and the Library-Bereft

Cosponsored by African American Medical Librarians Alliance SIG, Public Health/Health Administration Section

WSCC, Room 611, Level Six

2:05 p.m.
Avoiding the Squeeze Play: Equipping Physical Therapy Students in Identifying and Retrieving Evidence-Based Practice Materials Post-Graduation
Karen S. Lamson, Reference and Instruction Librarian and Assistant Professor, Blais Family Library, Massachusetts College of Pharmacy and Health Sciences–Worcester; **Michelle L. Zafron,** Coordinator, Reference Services, and Associate Librarian, Health Sciences Library, University at Buffalo, Buffalo, NY
Objectives: Successful implementation of evidence-based practice (EBP) requires its practitioners to be able to search and retrieve high-quality research. In the world of high-priced journal subscriptions and databases, physical therapists (PTs) in private practice lack such access. This paper describes how librarians at two academic institutions teach PT students the tools and strategies to remove this barrier to EBP.
Methods: Traditional library instruction sessions have focused on the paid databases of the institution. For those health professionals, such as PTs, who wish to use EBP as a decision-making tool and find themselves in workplaces lacking institutional subscriptions, this can be a disservice. This past year, two academic health sciences librarians at two separate institutions, one public and one private (University at Buffalo, NY, and Massachusetts College of Pharmacy and Health Sciences), chose to teach freely available EBP resources in addition to subscription databases. In addition to learning general searching skills, the students are also exposed to PEDro, PubMed Clinical Queries, National Guideline Clearing House, and Hooked on Evidence, an association-specific resource. Emphasis is placed on low-cost or free methods for identifying articles and obtaining full-text materials to assist in their clinical decision making.
Results and Conclusions: The instruction sessions were successful, and students were encouraged to use the "free" databases during their remaining time in the program allowing for additional questions and concerns to be addressed in the classroom setting. A survey was given to the students within the first year of the program to determine their confidence level and likelihood of using freely available resources postgraduation. As the survey results are not yet final, our data are inconclusive. A review of the literature suggests that information-seeking behaviors of PTs is an area ripe for more study.

2:25 p.m.
Assessing the Health Science Information Needs of Unaffiliated Health Professionals and Using Training on Openly Available Search Tools and Resources to Provide Solutions to Their Information Access Challenges/Barriers
Konstantina Matsoukas, Head, Reference, and Education Coordinator; **Michael Koehn,** Acting Director and Head, Resources Acquisitions and Organization; Augustus C. Long Health Sciences Library, Columbia University, New York, NY; **Diane Hauser,** Senior Associate, The Institute for Family Health, New York, NY
Objectives: To determine the (self-identified) medical literature and research training needs of unaffiliated health professional staff members employed by a network of federally qualified health centers serving disadvantaged populations. Data gathered about information resource access, usage, needs, and search habits were used to develop an education curriculum designed to teach users to take full advantage of open access (National Library of Medicine and other) information tools and resources.
Methods: A survey instrument was developed and piloted internally. Staff members (n=809) were invited to participate in the internal review board-approved (3-part, 13 question) survey hosted on SurveyMonkey via their active, institution-sponsored, Outlook email accounts. A total of 337 staff responded to the survey (42% response rate) that was open for a 3-week period (November/

December 2010), with 2 email reminders. Data gathered were de-identified and analyzed for frequencies based on demographic groupings. Informed by the survey findings, 10 one-hour classes were developed and delivered (February to May 2011) to staff at their dispersed locations and were recorded and made available for subsequent on-demand use (both via the parent organization's internal website and via a state area health education system's website). Class evaluations were administered to attendees after every session via the (GoTo/Citrix) webinar technology being used to broadcast the classes.
Results: About half of the respondents (153/337) did not respond to sections B and C of the survey (inquiring about current research habits and training needs) because they reported either not being involved in any research activities (48%) or not using health sciences (HS) literature in carrying out their work (38%). Forty percent of those who did complete sections B and C (183/337) reported having access to online HS information resources from an academic, medical, or professional affiliation beyond their employer. Top motivators for using HS information resources were (1) patient care or decision making, (2) self-initiated continuing education, and (3) providing patient education. Respondents reported generally starting their information research with Google or other search engines (58.3%), Google Scholar (8.9%), PubMed (9.5%), DynaMed (13.7%), UpToDate (3%), and other (6.5%). When asked to prioritize interest in a list of 14 classes (based on descriptive titles), classes on getting published, citation management, critically appraising the journal literature, and database-specific training garnered the least interest, while "Smart Googling for Health Professionals" garnered the most interest. The top-10 highest priority topics were developed into classes and were attended by a total of 100 attendees (across all classes). To explain inconsistencies between actual attendance data and priority/interest ratings assigned to classes in the survey, survey results were reanalyzed based on where (which online tool) a respondent generally began his or her searching. Statistical analyses showed that in many instances, the information needs and learning priorities of each of these user groups (based on their research tool starting point) alone varied from those of the overall respondents. For example, while all user groups similarly used information for patient care or decision making, Google users were less likely to be involved in clinical research projects and more likely to be looking for information to support self-initiated continuing education or quality improvement projects. PubMed users were more likely to be involved in preparing presentations, papers, or clinical research projects and less likely to be looking for patient education information. When prioritizing classes, the DynaMed or UpToDate users gave the drug information resources topic a higher interest ranking overall than those using Google as their starting point and than those using PubMed. Google users differed with all other groups in their lack of interest in a class on evidence-based resources, while a class on critical appraisal was as unappealing to Google users as it was to DynaMed and UpToDate users, yet very highly prioritized by PubMed users. Each user group (based on where respondents began their search) included a wide variation in job titles, with only the DynaMed and UpToDate user group being well-defined, largely consisting of physicians and nurse practitioners.
Conclusions: Unaffiliated health professionals of diverse roles have varied information and training needs that cannot always be neatly broken down by job title. Education and outreach efforts that group users by research habits, specifically, by which tool they turn to as their information research starting point, may be an efficient and effective way of developing a curriculum that best suits their information needs, learning priorities, and research ability. Further research needs to be done to determine if where someone starts their online information search is a reliable indicator or predictor of his or her learning priorities, interests, and needs.

2:45 p.m.
The DIY Medical Librarian: Creating Free Online Services for the Resource-Poor and the Library-Bereft
Hope Leman, Research Information Technologist, Center for Health Research and Quality, Samaritan Health Services, Corvallis, OR
Objectives: This paper discusses how librarians can create free online services in an era of escalating costs for electronic resources and dwindling library budgets.
Methods: This paper will discuss some of the past winners of the Rethinking Resource Sharing (RRS) Innovation Awards and provide tips on how medical librarians can create comparable resources and help to develop a worldwide resource sharing network that can serve the large number of health care providers and consumers who live in communities that lack hospital libraries or large academic research centers and, therefore, the access to electronic resources such entities provide. The prize winners discussed will include DataCite (which facilitates reuse and verification of data), RapidILL (a cost effective, user friendly interlibrary loan system), and the Information Delivery Services Project (IDS) (a system and a community in which academic libraries—public and private—in New York state collaborate to rapidly deliver information to users and which is committed to providing global access to its best practices and tools).
Results: The projects discussed demonstrate that it is entirely feasible and worthwhile (indeed imperative) for librarians to develop services of their own that can cost effectively deliver services to those who live in resource-poor settings both in the United States and abroad and thereby facilitate to scholarly research and increased access to health information.
Conclusions: Leadership in the development of free online resources has great potential for the field of health librarianship for showcasing the technological prowess and innovative thinking of health sciences librarians and in enabling them to extend services to currently underserved audiences.

3:05 p.m.
Addressing the Real-World Information Needs of Practitioners: A Statewide Initiative
Valerie Lawrence, AHIP, HEAL-WA Resource Librarian, HEAL-WA/University of Washington Health Sciences Library, University of Washington–Seattle
Description: In May 2007, the Washington State Legislature passed a bill directing the University of Washington Health Sciences Library to develop a web portal that would give all Washington-state licensed health care providers in specific license categories access to evidence-based information resources in support of patient care. The portal launched in January 2009. Three years after its inception, the HEAL-WA portal serves a potential user base of more than 170,000 licensed health care providers, including more than 90,000 registered nurses. This paper

will discuss a few of the challenges encountered in launching and maintaining a project of this magnitude, some of the lessons learned, and potential future directions for the portal.

Public Services Section

Hitting the Ball out of the Park: Reaching New Audiences

Cosponsored by Federal Libraries Section; Osteopathic Libraries SIG; Lesbian, Gay, Bisexual, and Transgendered Health Science Librarians SIG

WSCC, Room 604, Level Six

2:05 p.m.
Survival and Success Beyond Grad School: Improving Library Services to Postdoctoral Researchers
Aileen McCrillis, Research Librarian; **Alisa Surkis,** Translational Science Librarian; **Dorice Vieira,** Clinical Librarian; NYU Health Sciences Libraries, New York University–New York; **Pauline S. Beam,** Education and Information Services Librarian, Gustave L. and Janet W. Levy Library, Mount Sinai School of Medicine, New York, NY; **Tina O'Grady,** Doctoral Candidate, Biomedical Sciences, Tulane University, New Orleans, LA
Objectives: Postdoctoral researchers (postdocs) are responsible for much of the research produced at academic institutions and have significant information needs. Because postdocs are neither students nor faculty, they are often overlooked in library outreach efforts. The purpose of this study is to assess the information needs of postdocs with respect to traditional and emerging library services and resources.
Methods: The authors held three focus groups at two institutions to evaluate the current library usage and information needs of postdocs. Based on the findings of these focus groups, an anonymous online survey was developed to assess the general information needs of postdocs, as well as their interest in emerging library services, such as bioinformatics support and data management. The survey was created using Qualtrics survey software and was distributed through institutional postdoc email lists and newsletters. Quantitative and qualitative data were collected and analyzed to answer questions of how traditional library services fall short of meeting the needs of postdocs, what emerging library services are seen as most needed by this population, and what their perceptions are regarding the role of libraries in providing these services.
Results: Of the 74 academic institutions contacted, 45 distributed the survey, and almost 3,000 responses were received from those institutions, with respondents varying in both experience and research area. The predominant information needs identified were related to statistical analysis, bioinformatics, and data management. Identifying grant funding opportunities and research collaborators were also considered to be challenging tasks. Many respondents revealed a lack of awareness of or access to traditional library services, such as interlibrary loan.
Conclusions: Postdoctoral scholars have significant unmet information needs. The fact that many postdocs are not aware of library services or do not have full access to these services indicates that the information needs of this community have tended to be overlooked by health sciences libraries and/or by academic institutions. The responses relating to statistical analysis, bioinformatics, and data management highlight that these emerging library services are much needed.

2:25 p.m.
Supporting the Medical Support Staff: Outreach to Administrative Assistants and Secretaries
Debra A. Werner, Librarian, Science Instruction, and Outreach and Biomedical Reference Librarian, John Crerar Library, University of Chicago, Chicago, IL
Objectives: To design and implement a curriculum for administrative assistants and secretaries in an academic health center on the effective use of library resources.
Methods: Administrative assistants and secretaries in an academic health center who voluntarily registered for library instruction sessions were assessed to determine if library instruction improved participants' ability to effectively use library resources. Pre- and post-tests were embedded in the instruction presentation using an audience response system (i.e., clickers) to assess comprehension of concepts taught, and a questionnaire was administered at the conclusion of the session, designed to assess participants' perceptions of the usefulness of the session.
Results: Prior to being given instruction, 43% of participants were unable to identify parts of a citation; after instruction, 100% were able to correctly identify parts of a citation. Seventy-three percent reported that the instruction session will have a positive impact on their workflow, especially regarding increased efficiency; 73% reported that the session either increased their confidence in using library resources (53%) or helped reduce feelings of fear or frustration (20%).
Conclusions: Library instruction tailored to the job functions of administrative assistants and secretaries in an academic health center helps improve library research workflow and has a positive impact on their confidence in using library resources. Follow-up studies need to be conducted to determine the level of impact in workflow improvements.

2:45 p.m.
New Audience, New Game: Supporting Biomedical Researchers' Data Management Needs
Layne Johnson, Translational Science Information Specialist, Health Sciences Libraries; **Jonathan B. Koffel,** Clinical Information Librarian, Bio-Medical Library; **Lisa Johnston,** Research Services Librarian and Co-Director, University Digital Conservancy, Science/Engineering Library; University of Minnesota–Minneapolis
Objectives: Most researchers must manage and share data but often lack necessary knowledge and skills. Librarians are well positioned to meet researcher data needs because they possess expertise in information organization and description and have knowledge of national and local data policies. This paper will describe one library's efforts to better understand and meet the data management needs of researchers.
Methods: The university libraries conducted a broad survey of campus researchers in 2009 and identified a range of needs surrounding data management, storage, and sharing. Librarians at the health sciences libraries expanded on this study by conducting focused interviews with select researchers in the health sciences. We targeted influential faculty and those supported by grant funding. Questions focused on the data being produced, its storage, retention, organization, description, and how it was

being shared and distributed. We reviewed these findings with the research services librarian and collaborated with her to develop a set of specific tools and services to help address health sciences data issues. These tools and services where then promoted via consults, presentations to research groups and departments, and targeted emails.
Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

3:05 p.m.
Informatics Instruction through an Interdisciplinary Seminar Series: Introduction to Genomic Medicine
Kristi Holmes, Bioinformaticist, Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO
Objectives: Genomics play an increasingly significant role in 21st century research and clinical practice, introducing new challenges to everyone in the academic research setting. In order to quickly address this growing need, a seminar series was organized by an interdisciplinary team to offer an introduction to relevant topics and technologies, informatics approaches, and clinical application.
Methods: A seminar series was organized to offer an introduction to relevant topics and experimental approaches in the area of genomic medicine. The series offered a practical background in molecular biology and genetics, an introduction to genomic research and applications of genomic technologies in the research environment, and an understanding of the clinical application of gained knowledge. The series was developed collaboratively by members of the Washington University School of Medicine Departments of Medicine, Genetics, Pediatrics, Pathology, and Immunology and the Becker Medical Library and was sponsored by the Washington University Clinical and Translational Sciences Institute. Because seminar organizers hailed from diverse departments on campus, they were able to contribute very different perspectives during the development of the seminar topics. Campus experts, including an information expert from the library, delivered the content and each session provided ample time for questions and discussion. An evaluation was completed post-class via survey.
Results: Session attendance ranged from 45 people to 200 people (depending on the topic), with an average attendance of 85 people per week. The library established a course website and a course email discussion list to facilitate communication with attendees, including reminders of upcoming lectures and announcements of events and services of interest on campus. The course content is currently being refined based on an evaluation and will be expanded to a credit-based offering in 2012.
Conclusions: The survey provided valuable feedback on topics, format, and speakers. These data are being used to refine the series for expansion in 2012 and will be discussed. Seminar organizers hailed from diverse departments on campus and were able to contribute very different perspectives to the project. The library played a large role on this project, reinforcing the concept that librarians at all levels can play a valuable role in delivering cutting edge content through participation on similar collaborations.

Research Section

Effective Dissemination of Findings: Pitching Your Research with Speed and Accuracy

Cosponsored by Public Health/Health Administration Section, International Cooperation Section, Translational Sciences Collaboration SIG, Clinical Librarians and Evidence-Based Health Care SIG, Outreach SIG

WSCC, Room 615/616, Level Six

2:05 p.m.
A Method for Your Madness: Applying Return on Investment
Betsy Kelly, Associate Director, Health Information Resources and Assessment and Evaluation Coordinator, National Network of Libraries of Medicine, MidContinental Region, Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO; **Claire Hamasu,** Associate Director, Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City; **Barbara Jones,** Missouri Library Advocacy Liaison, J. Otto Lottes Health Sciences Library, University of Missouri–Columbia
Objectives: Measuring the value of the library has become an integral part of assessing the library's economic impact and contributions to the larger institution. Recently, approaches have been discussed and methodologies and metrics employed to illustrate the return to the institution. We will examine the process, metrics, calculations, and analysis one must consider in designing a program to demonstrate library value.
Methods: The authors reviewed the literature, worked with existing tools, and analyzed studies reported by medical, academic, and public libraries. We identified issues that must be addressed in designing a valuation study. Factors include the intended audience, the purpose of the process, metrics that can be applied, types of resulting data, and methods for analyzing and reporting the results. The level of difficulty, expertise, cost, and time commitments were also considered. A matrix will be developed that those embarking on a valuation study can employ when designing and carrying out the program.

2:25 p.m.
Assessing the Impact of Evidence Summaries in Library and Information Studies: A Mixed Methods Approach
Lorie Kloda, AHIP, PhD candidate, School of Information Studies, and Associate Librarian, McGill University Libraries, McGill University, Montreal, PQ, Canada; **Denise Koufogiannakis,** Collections and Acquisitions Coordinator, University of Alberta Libraries, University of Alberta–Edmonton, Canada; **Alison Brettle,** Professor, School of Nursing, Midwifery and Social Work, University of Salford, Salford, United Kingdom
Objectives: Since 2006, the open access journal *Evidence Based Library and Information Practice* has published over 200 evidence summaries. These summaries, consisting of structured abstracts and critical appraisals of original research, attempt to bridge the gap between research and practice. This study investigates the impact of evidence summaries on librarians' knowledge and practice by developing and validating an impact assessment tool.

Methods: Using the critical incident technique, this mixed methods study began by developing and testing a survey questionnaire to assess impact of evidence summaries on librarians' knowledge, practice, and user communities. The survey was subsequently disseminated to 153 readers of the journal who were asked to respond with reference to a specific incident in order to determine the types of impact that the evidence summaries may have in areas such as practice improvement, learning, reassurance, and confirmation for decision making. Survey results were collected from 86 participants, and follow-up in-depth interviews were conducted with a subsample of 15 participants to expand on the survey's findings and to determine the validity of the assessment tool.
Results: Thematic analysis of interviews revealed themes to help explain survey questionnaire results and led to preliminary validation of the tool to assess the impact of evidence summaries. Preliminary findings suggest that evidence summaries may lead to impact at four levels: librarian cognition, individual practice, community practice, and library users. Findings may provide insights regarding the usefulness of evidence summaries and the potential ways in which they may be improved.
Conclusions: This study provides unique insight into whether evidence summaries are an effective means of bridging the research-practice gap. These results can then be applied to the health library community and its scholarly communication channels. The validated impact assessment tool may also be adapted for other sources of information in library and information practice. Overall implications for health librarians will be considered.

2:45 p.m.
Covering All Your (Data) Bases: A Comparison for Autism Researchers
Rex R. Robison, AHIP, Informationist, NIH Library, National Institutes of Health, Bethesda, MD
Objectives: First, to compare the coverage of autism articles in four bibliographic databases: PubMed, Web of Science, Scopus, and PsycINFO. Second, to conduct a library research project that would be useful to neuroscientists and to use data to convey to scientists some of the ways that databases may differ.
Methods: This was a comparative study in three parts. (1) To show how every database indexes only some of the literature, each database was searched for documents with "autism" or "autistic" in the title. Results from each database were downloaded and collapsed into a single bibliographic record for each document, noting the source databases. A color-coded chart was generated to demonstrate which databases contained each document. (2) To reveal differences in the extent to which databases index various journals, the proportion of the articles from the eleven most prolific journals (from the sample in part 1) was identified for each database. (3) To reveal how each database treats search terms, the "basic" search mode with default options was used to mimic what the typical user probably encounters. Each database was searched for the word "autistic" and variations, in different search modes.
Results: The comparison confirmed that the databases differ in coverage and search features. Only a quarter of the documents could be found in all four resources. Each resource held unique documents, particularly for publication types other than journal articles and for recent publications. However, all four databases had most of the most highly cited articles. A graphic representation of the data was prepared, and a poster was submitted to the autism section of a large neuroscience conference. The poster was displayed amongst the scientific research posters and was well attended.
Conclusions: Scientists are very receptive to data-driven information science that informs their work. Although it is frequently cited that scientists do not learn more about library resources because they are too busy or no longer have to visit a library in person, it is possible to reach this audience at conferences and in journals, situations where they are primed to pay attention and learn new things. Using the skills they already have, librarians can demonstrate their expertise and justify their advice in ways that scientists will accept and find interesting.

3:05 p.m.
Knocking One out of the Park: Creating Effective Posters for Presentation
Jeffrey Coghill, AHIP, Outreach Librarian and Director, Area Heath Education Center Library Services; **Jason Cottle,** Graphic Designer; Laupus Library, East Carolina University, Greenville, NC
Objectives: Creating a poster for a conference presentation can seem easy—as easy as hitting a home run. However, without knowledge of good poster design, an author's poster may not adequately express their point or intention within a poster framework, leading to a strikeout.
Methods: Examples of common missteps include having too much material for a poster (too many walks), a lack of hierarchy (no starting lineup), or confusing graphic elements (pitcher-catcher signs unclear). As a result, the poster may be overlooked or bypassed even though the author has exceptional research. In this paper presentation, we will go behind the scenes to find out what makes an effective poster and what you can apply to your next poster and have you swinging for fences in no time.
Results: The presenters have collectively worked on nearly twenty MLA and regional meeting posters and review the poster presentation process from start to finish, a major league's seasons worth of posters. Some of the topics will include: design and layout, software, using "white space," effective color use, backgrounds, font choice, the importance of proofreading/feedback, printing, and author presentation. During a poster session, time is limited: you have about two minutes to make an impression—that' about half an inning in baseball. Effective research should be presented clearly to make readers stop and discuss a researcher's findings (and hold on base).
Conclusions: This paper presentation will help our colleagues design better posters and will therefore improve the presentation of their research, and swing for the fences thus knocking the ball out of the park. The presenters also invite attendees to bring small samples (electronic or print) of their own past designs for on the spot critique. This constructive and helpful criticism will be offered at the end of the presentation (good managing and coaching).

Section Program

Tuesday, May 22, 6:00 p.m.–7:30 p.m.

Medical Informatics Section

Tech Trends

Cosponsored by Educational Media and Technologies Section, Medical Library Education Section

WSCC, Room 608/609, Level Six

Leveraging Social Networking Tools to Connect with Patrons

Fatima M. Mncube-Barnes, Library Director, Library, Meharry Medical College, Nashville, TN; **SuHua Fan,** Librarian and Assistant Professor, Health Sciences Library, University of Alabama–Tuscaloosa

Objectives: To illustrate the use of highly reviewed technologies, which are also known as social networking tools in academic libraries.

Methods: Suggested ideas on the use of social networking tools in academic libraries will be illustrated. These include productivity, file sharing, research, brainstorming, mapping, and presentation tools. Digital rights management (DRM) of some of these tools will also be examined.

Results and Conclusions: The roles of librarians are forever changing due to ongoing inventions of new technologies and resources. As information professionals, it is important for librarians to keep abreast with emerging technologies in order to instruct and train faculty and students.

The Google+ Effect

Gabriel Rios, Deputy Director, Lister Hill Library of the Health Sciences, University of Alabama–Birmingham

Objectives: Discuss Google's social networking platform, Google+ and examine the effects on other social networking services.

Methods: Introduce audience to Google+ and discuss parallels to other popular social networks. Examine the effects of Google+ on other social networking services.

Results and Conclusions: My results are not complete yet. If selected, I will come back into the system and enter my results after December 2011.

Panelists: **Kimberley Barker,** Emerging Technologies Librarian, Claude Moore Health Sciences Library, University of Virginia–Charlottesville; **Michelle Frisque,** Head, Information Systems, Galter Health Sciences Library, Northwestern University, Chicago, IL; **Emily Hurst,** Instructional Services Librarian, National Network of Libraries of Medicine, South Central Region, HAM-TMC Library, Houston Academy of Medicine-Texas Medical Center–Houston; **Eric Schnell,** Associate Professor, SBS-Biomedical Informatics and University Libraries, Health Sciences Library, Ohio State University–Columbus

Poster Session 1

Sunday, May 20, 3:30 p.m.–4:30 p.m.

WSCC, 4A/B, Level Four

1

50 Years! Nursing and Allied Health Resources Section (NAHRS) of MLA

Janet G. Schnall, AHIP, Information Management Librarian, Health Sciences Library, University of Washington–Seattle; **Margaret (Peg) Allen, FMLA,** Consultant, Health Knowledge Consultants, Stratford, WI; **Lin Wu, AHIP,** Associate Professor and Reference Librarian, Health Sciences Library, University of Tennessee Health Science Center–Memphis; **Wanda E. Anderson,** Nursing/Health Sciences Bibliographer, Thomas P. O'Neill Jr. Library, Boston College, Chestnut Hill, MA

Objectives: Celebrate the 50th anniversary of the Nursing and Allied Health Resources Section (NAHRS) of MLA by highlighting our history and achievements.

Methods: Resources from the NAHRS archives at Boston College, published MLA annual meeting proceedings, and items from the NAHRS history scrapbook have been digitized and presented via a looped slide show and reproduced on a poster. The poster and slide show are designed for display at MLA chapter meetings during the coming year and will be permanently accessible at www.nahrs.mlanet.org.

Results: From 1962, when eleven librarians founded the Nursing Group of MLA at the annual MLA meeting in Chicago until now, NAHRS has grown to become the second largest section of MLA, with 411 current members. In addition to an active email discussion list, a newsletter, a redesigned website, a Nursing Resources wiki, social networking sites, a new Selected List of Nursing Journals, and more, NAHRS has a history of promoting continuing education (CE) and research. A CE highlight was the evidence-based nursing practice symposium at MLA in 2003 with nursing and MLA CE credit. Key research projects include the Magnet Coordinator Study and the ongoing task forces to map the literature of the nursing and allied health disciplines, resulting in several publications in the *Journal of the Medical Library Association.* NAHRS's collaborations with other health professional organizations include the Interagency Council for Information Resources in Nursing (ICIRN) and International Academy of Nursing Editors (INANE).

Conclusion: NAHRS will continue to provide leadership, a united voice promoting quality health information services for nursing and allied health, and a venue to network with other librarians responsible for nursing and allied health information access. Our goal is to ensure excellence in library information services for nurses and allied health professionals.

4

Home Field Advantage: Librarians in the Outpatient Clinic, a Five-Year Retrospective

Lee A. Vucovich, AHIP, Assistant Director, Reference Services, and Assistant Professor, Lister Hill Library of the Health Sciences; **Cara L. Wilhelm,** Clinical Reference Librarian and Assistant Professor, Lister Hill Library of the Health Sciences; **Satyra S. Howell,** Librarian, Kirklin Clinic; **Tracy E. Powell, AHIP,** Associate Professor and Clinical Services Librarian, Lister Hill Library of the Health Sciences; University of Alabama–Birmingham

Objective: To evaluate the services and resources provided by the Patient Resource Library (PRL) since the library opened in November 2006 and the experiences involved in launching and managing a unique interdisciplinary collaboration. Successes, lessons learned, changes implemented, and future directions will be shared.

Methods: In November 2006, the PRL opened in an adult, interdisciplinary outpatient clinic to meet the recognized need of providing access to quality consumer health information on-site in the academic medical complex. A unique collaboration by the clinic, the academic medical center library, and the Comprehensive Cancer Center places professional information resources and services prominently in the clinic space. A team of librarians uses a wealth of licensed electronic resources in addition to consumer-oriented pamphlets, books, and websites in fielding a wide range of information needs at the point of care. A variety of data is collected on an ongoing basis, and the data from the past five years will be reviewed. The data collected include numbers of visitors, demographics of users, information requested, types of materials used to answer questions, materials purchased and ordered, and documentation of outreach efforts.

Results: Over 5 years, there were 27,134 visitors, with 7,635 information interactions logged. The majority of information requestors were white females, aged 41–75. African American women requested information more often than men. Ninety-three percent of requests were in person. The majority of questions answered by librarians related to cancer topics. Questions relating to prevention and wellness, including diet and exercise, were common. The library book collection was doubled (to 1,044 volumes) in the 5 years the library has been open, expanding beyond the original cancer collection. Two hundred sixty-six books replaced lost or withdrawn material. Pamphlets were more popular than books. Librarians used select Internet resources to supplement the physical collection 78% of the time. The library has continued to engage in new activities supporting the clinic including patient portal registrations, increased meeting room use, and a pilot in providing nurse-selected, targeted information to a kidney clinic. Library resources and services have been marketed to inpatients and families in the hospital as well. Outreach in the clinical setting is challenging. Librarians presented at 15 meetings in the clinic and the hospital, took information to clinics, promoted university-wide health related services, created a website, and promoted the library at various hospital and clinic activities.

Conclusions: The PRL has become a valuable component of the clinic's efforts to empower patients. The physician leadership approved ongoing financial support when the initial pilot funding expired. The PRL management structure has been reorganized and strengthened, retaining the original collaborative arrangement. The clinic's patient satisfaction survey includes questions about the library. Challenges presented by the unique staffing model have been managed through flexibility, creativity, and communication among the librarians. These same attributes have helped meet the challenges of working effectively within the organizational structure and performance expectations of the clinic. Planned initiatives include efforts to reach patients who do not or will not visit the physical library, including families of hospital

patients. Librarians plan to work with more nurse educators to provide targeted information for specific patient groups and to use emerging technologies to proactively provide resources directly to the user. Clinical staff education on information resources and services, including health literacy, is an ongoing effort and will include online training. Increased awareness through targeted marketing efforts in both the clinic and the hospital remain vital to the continued success of PRL.

7

Meeting the Challenge of Evidence-Based Medicine in the Family Medicine Clerkship: Closing the Loop from Academics to Office

Susan K. Cavanaugh, Evidence-Based Medicine Librarian, UMDNJ Camden Campus Library @ Cooper, University of Medicine and Dentistry New Jersey–Camden; **Nancy Calabretta,** Assistant Director, University of Medicine and Dentistry New Jersey Camden Campus Library, Cooper University Hospital, Camden, NJ

Objectives: Students learn to identify patient care questions from their family practice office; formulate clinical questions (patient characteristics, type of intervention, control, and outcome [PICO]); search for evidence; grade evidence using the Strength of Recommendation Taxonomy (SORT); evaluate evidence using the Patient Oriented Evidence that Matters (POEM) format; apply the evidence with their preceptors; present their work in a formal session with the chief of family medicine/clerkship director and the evidence-based medicine (EBM) librarian.

Methods: The EBM librarian teaches a 3-hour seminar at the beginning of each clerkship rotation. The first hour includes a review of EBM fundamentals, the evidence pyramid, and an in-depth examination of observational and clinical research design, ending with 2 brief exercises on study design and EBM terminology. The next hour focuses on screening and diagnostic tests, including a review of 2x2 tables and the concepts of sensitivity, specificity, positive predictive value, and negative predictive value, ending with an exercise on the sensitivity and specificity of serologic tests for celiac disease. The last hour covers the POEM concept. Students learn how patient-oriented evidence differs from disease-oriented evidence. The elements of POEMs are outlined, and samples of published POEMs are used for discussion. SORT, a patient-centered approach to grading evidence developed by family medicine academics, is reviewed.

10

The Rise of Asia in the Publication of Medical Information and Research: A Geographical Trend Analysis of the PubMed Database

Mark L. Danderson, President, MDanderson Consulting Group, Kailua-Kona, HI

Objective: The number of manuscripts submitted by Asian authors has increased over the past decade. However, anecdotal evidence indicates the general quality of Asian research is not equal to the general quality of research from North America and Europe. The purpose of this research project is to measure the relative change in the quantity and quality of medical information produced by Asia-based authors in the period 1997–2011.

Method: I designed unique search queries of the affiliation field on the PubMed database, focusing on selected geographical locations of article authors. The queries were run on the same day, August 28, 2011. The geographic locations selected where: null, United States, United Kingdom, Canada, France, Germany, Italy, Sweden, Netherlands, Spain, Australia, China, Japan, India, South Korea, Taiwan, and Hong Kong. The geographic search was first conducted against the entire database to determine the quantity of medical information produced globally, and then a search was conducted for each individual country. I then attempted to measure the quality of the research from each country by measuring the number of human clinical trials, articles published in core journals (core articles as defined by PubMed), and human clinical trials published in core journals by country on the assumption that it is more difficult to publish an original research paper in a core journal than it is to publish review articles, letters, editorials, and abstracts. Queries were run for each year in the period for the Asian countries and in 1997, 2004, and 2011 for the North American and European countries. A trend analysis was conducted for the selected Asian countries for each year of the time period, and a comparative analysis was conducted for all countries in the study for the years 1997, 2004, and 2011.

Results: In the time period 1997–2011 the annual number of articles archived on PubMed increased 116% (1997: 451,993, 2011: 976,875). In that time period, the output from China, South Korea, and India increased by a factor of 15, 13, and 6, respectively. The global number of archived published human clinical trials per year increased by 27% (1997: 22,673, 2011: 28,886); while the annual publication of human clinical research from China, Korea, and India increased by a factor of 5, 10, and 1.8, respectively. The number of articles published annually in the core journals increased by 9% (1997: 48,617, 2011: 52,973); while the number of articles from China, South Korea, and Taiwan published in core journals annually increased by a factor of 18.6, 7.0, and 3.0, respectively, during the study period. In 1997, Japan was the second largest source of medical information after the United States (7% of all articles). By 2011, China had replaced Japan to become the second largest source of information (7.3% of all articles). China, South Korea, Taiwan, Hong Kong, Japan, and India accounted for only 10.2% of all content archived on PubMed in 1997. By 2011, their collective share had increased to 18.7% of all the articles archived in that year. Though the Asian share of articles for human clinical trials, articles published in core journals, and human clinical trials published in core journals increased at a less dramatic rate than for all articles combined during the study period (from 8.3% in 1997 to 13.2% in 2011, from 5.3% in 1997 to 7.6% in 2011, and from 5.2% in 1997 to 6.5% in 2011, respectively); nevertheless 4 of the 5 Asian countries in the study increased their share of articles in all subcategories during the time period. Only Japan, of the Asian countries, saw a decline in its share of content published across all categories of article types.

Conclusion: From the period 1997–2011 a significant shift has occurred in the quantity and quality of medical information out of Asia. China, India, and South Korea, in particular, have dramatically increased their output. Though these countries increased their share in all the categories of articles studied, it does appear that Asians have had less success in publishing human clinical trials in the core journals. This could be an indication that research from China, South Korea and India is still not up to a standard required by leading journals. More research would be required to determine the reason for the relative lack of success of authors from these countries in publishing clinical research in the core journals.

13

A Clinical Librarian's Experience of Involvement in the Development and Updates of Institutional Clinical Practice Algorithms

Yimin Geng, Clinical Librarian; **Clara Fowler,** Manager, Information Services; Research Medical Library, University of Texas MD Anderson Cancer Center–Houston

Objectives: This poster will demonstrate the role of the clinical librarian in supporting the development and update of evidence-based institutional clinical practice algorithms at a comprehensive cancer center.

Methods: The Research Medical Library serves faculty, staff, and students of the University of Texas MD Anderson Cancer Center. The Research Medical Library partners with the Department of Clinical Effectiveness to support the implementation of the current evidence through developing, maintaining, and evaluating clinical practice algorithms and other patient care tools. As a committee member of the clinical effectiveness subcommittee, the clinical librarian from Research Medical Library used varied approaches to communicate with multidisciplinary developers to identify their information needs and deliver the information services for the clinical algorithm development and updates.

Results: During the period of January 2011 to January 2012, thirty-five institutional algorithms underwent development or updates at MD Anderson. The clinical librarian carried out literature searches for sixteen of those algorithms. Clinical search questions were initiated by requests from clinical teams, the Department of Clinical Effectiveness, or the librarian's proactive approach. The nature of literature searches included comprehensive and systematic searches for algorithm development, general searches for annual updates, and location of information for specific clinical questions. Various types of medical literature resources were used to support this evidence-based process. Search results provided pertinent information for the clinicians and were delivered using email or SharePoint.

Conclusions: Clinical practice algorithms, formatted as flow charts or grids, are intended to provide guidance in clinical decision making aligned with evidence-based practice. Development of new algorithms and updates of existing algorithms provide a great opportunity for Research Medical Library and clinical librarian to provide valuable information to the development teams.

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A Study of Physicians' Attitudes, Knowledge, Skills, and Educational Needs in Evidence-Based Medicine

Chang Hui-Chin, Director, Library, School of Public Health, Chung Shan Medical University Hospital, Taichung, Taiwan; **Chiu Tzu-Heng,** Associate Director, Library, Taipei Medical University, Taipei, Taiwan; **Wu Chih-Lung,** Professor, School of Medicine; **Tsai Chung-Hang,** Professor, Department of Pathology; **Lin Fang-Yu,** Professor, Evidence-based Medicine Center; **Lin Long-Yau,** Professor, Department of Obstetrics and Gynecology; Chung Shan Medical University, Taichung, Taiwan

Objectives: The objective of this study was to survey the attitudes, knowledge, skills, and educational needs of the physicians for evidence-based medicine (EBM). The research findings may be used as guidance by the educator for EBM curriculum planning.

Methods: The physicians of a medical center at the central Taiwan were surveyed with self-structured questionnaire. The 323 questionnaires were dispatched, with 235 questionnaires returned; the response rate was 72.75%. The questionnaire composed of 6 domains: (1) attitude toward EBM, (2) understanding of EBM terminology, (3) skills of EBM practice, (4) demand of EBM learning, (5) background of physician, (6) familiarity of resources. Cronbach's alpha ranged from 0.9–0.972 for each categories. Student t test, Pearson correlation, Anova, and multivariate regression were used for analysis.

Results: Most physicians had a positive attitude toward EBM. In knowledge and skills of EBM, the average score in physicians' understanding of EBM terminology was 3.55–0.80 (5 for fully understanding, 1 for not understand at all). And in physicians' skills of EBM practice, item of appraisal of research articles, and clinical application of EBM got the lowest score. The educational demand of EBM for physicians was "Statistics." And PubMed was the most frequently used resource for evidence searching. The physicians in the medical and surgical department have significant relatively higher score in the attitudes, terminology understanding, and skills of EBM.

Conclusions: (1) The knowledge and skills of EBM of physicians are variegated; there is room for improvement. (2) We should provide more courses on statistics, efficacy evaluation, and study design. (3) In general, physicians still lack confidence in applying the EBM to clinical practice. We suggest that EBM learning should be incorporated into daily work. (4) We should improve the education of EBM more aggressively for physicians other than those from the medical and surgical department.

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A Testing Time: Strategies Used to Keep the Ball in the Air during an Efficiency Review

Andrea Lane, Information Specialist Manager; **Alex McNeil,** Information Specialist; BMJ Evidence Centre, BMJ Publishing Group, London, United Kingdom

Objectives: An efficiency review in the department led to a significant budget cut across all teams, including the information team. Information specialists participated in reviewing existing processes and then in testing out proposals for new methods that would fulfill the requirement of cutting down on time spent in search and appraisal, while still maintaining an acceptable methodology.

Methods: In this case study, information specialists devised seven tests designed to reduce the number of studies retrieved by current search strategies but to continue finding the most important and current studies. Tests included searching subject headings only and searching a journal subset. Each team member chose a set of results to use as a validation data set and used this to work out the sensitivity of each test strategy compared to the usual approach. Records of numbers of results obtained by each test, numbers filtered for further assessment, and then the percentage difference were kept to analyse the strengths and weaknesses of each. The test that performed the best was considered for selection for the new methodology for the department.

Results: After the outcome of the efficiency review, a new team comprising information specialists, evidence scanners and evidence analysts was formed. Using information collected from the tests, information specialists influenced the creation of a new methodology that would drive evidence retrieval for the whole

department. This methodology will continue to be tested and refined during 2012.
Conclusions: This poster will report on interim results. It will illustrate the tests undertaken and how they performed against the existing search process including the limitations of each test. It will additionally reveal progress in the new evidence centre methodology, showing how the test searches were included in the new methods and whether any other search approaches that emerged after the efficiency review, for example, including observational searches, were also included.

22

A Whole New Ballgame: Data Services in the Library

Lisa Federer, AHIP, Health and Life Sciences Librarian, Louise M. Darling Biomedical Library, University of California–Los Angeles

Objectives: This poster will consider how libraries can leverage their staffs' expertise and existing assets to develop data services that support their institutions' research missions. As e-science and data-driven research become increasingly ubiquitous, data support offerings represent meaningful value-added services that can help reaffirm the library's importance to furthering scientific and biomedical research.
Methods: The library's role in providing data services at a major research university will be surveyed, including both current and planned services. Current services include an institutional repository, a data management planning tool, and a "data inbox" email where researchers may send their data curation questions. A pilot project currently underway will assess the data needs of translational researchers and offer small-scale projects to test the feasibility of providing data services through the library. Finally, the library's participation in the Association of Research Libraries/Digital Library Federation E-Science Institute will help in creating a strategic agenda for developing the library's role in e-science on campus.
Results: Existing services have been well received, indicating that researchers view the library as a worthy partner in their e-science endeavors. Need still exists for many data services that librarians are qualified to offer, such as metadata and data curation services, but efforts must be made to provide adequate staffing to ensure sustainability of services. Communication and coordination across campus groups is also essential to prevent duplication of effort.
Conclusions: As the library's role continues to evolve in the digital age, e-science presents a valuable opportunity to engage researchers, provide new services, and reaffirm the library's importance to the research mission of the university.

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An Assessment of Needed Competencies to Promote the Data Curation and Management Librarianship of Health Sciences and Science and Technology Librarians

Andrew T. Creamer, Medical Librarian Intern, Lamar Soutter Library, Medical School, University of Massachusetts–Cambridge, MA; **Myrna E. Morales,** Librarian and Technology Coordinator, National Network of Libraries of Medicine, New England Region, Lamar Soutter Library, Medical School, University of Massachusetts–Cambridge, MA; **Donna Kafel,** Librarian and eScience Project Coordinator, National Network of Libraries of Medicine, New England Region, Lamar Soutter Library, Medical School, University of Massachusetts–Shrewsbury; **Javier Crespo,** Associate Director, National Network of Libraries of Medicine, New England Region, Medical School, University of Massachusetts–Shrewsbury; **Elaine Martin,** Director, Lamar Soutter Library, Medical School, University of Massachusetts–Shrewsbury

Objectives: The purpose of this study was to evaluate health sciences librarians' needed data curation and data management competencies to support nascent and future patron and institutional e-science initiatives. The data from this research will be used to create relevant future professional development for health sciences librarians interested in using technology to digitally manage and curate large data sets.
Methods: The team created the assessment tool using content analysis of digital curation and management literature and data management curricula to create individual competencies surveys using SurveyMonkey. The team used the Digital Curation Centre's elements of the data lifecycle as codes for the analysis. The study targeted the needed data curation and data management competencies of 124 health sciences and science and technology librarians in 6 US states who are on an email discussion list of librarians interested in learning about e-science. The sample for this study was 63 librarians.

28

Turn Your Library Tutorial into a Hollywood Movie

Jin Wu, Emerging Technologies Librarian, Norris Medical Library, University of Southern California–Los Angeles

Objectives: Creating library tutorials has always been one of the challenging tasks for librarians. Traditionally, librarians use Camtasia or Adobe Captivate to create video tutorials. These tutorials usually are lengthy, slow paced, and lack customization and vividness. Moreover, once created, these tutorials are difficult to revise or update. We wanted to find a better method for producing library tutorials.
Methods: After evaluating some of the most popular tutorial-creation software, we decided to adopt a new approach using Adobe After Effects, a software published by Adobe Systems, usually used in the postproduction process of filmmaking and television production. Unlike traditional tutorial-creation software, After Effects allows users to animate, alter, and composite media not only in two dimensions but also in three-dimensional space with various built-in tools and third-party plug-ins for making videos that look like a film or an advertisement instead of a typical library tutorial. It allows you to not only capture and edit video, but to create videos from a variety of sources. These film-like, fast-paced, eye-catching videos have been used not only for formal library instruction, but also for orientations to the library, introduction of new library services, publicity of new initiatives, and other situations.

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Analysis of Librarian-Mediated Literature Searches Using a Clinical Electronic Data Capture System

Jennifer A. Lyon, AHIP, Clinical Research Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; **Hannah F. Norton, AHIP,** Reference and Liaison Librarian,

Biomedical and Health Information Services, Health Science Center Libraries; **Rolando Garcia-Milian,** Basic Biomedical Sciences Librarian and Liaison, Biomedical and Health Information Services, Health Science Center Libraries; University of Florida–Gainesville

Objectives: The purpose of this project is twofold: to analyze librarian-mediated literature searches conducted by librarians at the University of Florida Health Science Libraries (HSCL) and to evaluate the usefulness of REDCap (a clinical trial data capture system) for storage, management, and analysis of search strategies, results, and requester demographics.

Methods: The HSCL's former paper-based system did not facilitate reuse of requests for training purposes or service evaluation or allow easy analysis of user demographics. In the fall of 2010, the HSCL initiated the novel application of REDCap to electronically record search requests and mediated results. Utilizing funds awarded by a UF Smather's Libraries Grant in November 2010, a 12-year backlog of paper-based mediated literature searches was entered into REDCap during January-April, 2011. Over 1,100 such searches exist and provide a robust data set for analysis. Simultaneously, HSCL librarians are prospectively and continuously recording new searches. REDCap reports can be generated and subjected to additional analysis in Microsoft Excel and other statistical analysis programs as needed.

Results: The data were scrutinized for user demographics, question types, topics, workload, and training needs. We examined relationships between types of questions and users, topics and medical specialties, and librarian experience and types of deliverables. Also, we investigated how patron populations, questions, and deliverables have altered as library services and structure have changed over the past twelve years. Finally, we examined the usability of the REDCap system for recording operational metrics.

Conclusion:: The data gleaned from this project allow us to illuminate the information-seeking behaviors of HSCL clients. Rapid electronic access facilitates the reuse of search strategies and results, work flow tracking, user needs, and targeting of continuing education. Librarians can share results, identify subject topics for proactive preparation of materials, and recognize potential areas of collaboration. Future uses include tailored adjustments to HSCL collections, identification of novel users, and internal training for librarians.

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Assessing and Analyzing the Information Needs of Research Complex Tenants

Marisa Conte, Clinical and Translational Science Liaison; **Marci Brandenburg,** Bioinformationist; **Judith Smith,** Liaison Librarian; **Whitney Townsend,** Liaison Services Librarian and Coordinator, Health Sciences Executive Research Service; Taubman Health Sciences Library, University of Michigan–Ann Arbor

Objectives: A public university expanded its research enterprise with the acquisition of a large research complex, housing select labs and clinical and basic science engaged in translational research and increasing the development of public-private partnerships. To determine the information needs of these clients and deliver appropriate library services, librarians designed a structured interview and met with various research complex tenants.

Methods: Librarians made contact with research complex tenants from various research and administrative units, based on a university-generated list. An attempt was made to contact at least one person per unit. A structured interview was used to collect information from participants. Data analysis was done using NVivo. The interviews provided valuable insight into tenants' information needs, gave the librarians contacts at the research complex, and established the library as a partner in the research enterprise.

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Building a Farm Team: Ten Years of Developing New Academic Health Sciences Library Directors: The National Library of Medicine/Association of Academic Health Sciences Libraries Leadership Fellows Program

Carolyn E. Lipscomb, AHIP, Program Manager, Association of Academic Health Sciences Libraries, Atlanta, GA; **Barbara A. Epstein, AHIP,** Director, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA; **Lynn Kasner Morgan,** Associate Dean (retired), Information Resources and Systems, Mount Sinai Medical Center, New York, NY; **M.J. Tooey, AHIP, FMLA,** Associate Vice President, Academic Affairs and, Executive Director, Health Sciences and Human Services Library, University of Maryland–Baltimore

Objectives: In response to a documented need to build the next generation of leadership for academic health sciences libraries, the Association of Academic Health Sciences Libraries (AAHSL), with cosponsorship from the National Library of Medicine (NLM), initiated a program to identify, encourage, and develop candidates for director. The poster examines how to measure program results and identifies factors of success.

Methods: Launched in 2002, the NLM/AAHSL Leadership Fellows Program selects five fellows annually through a competitive process and pairs them with mentors who are current AAHSL directors. Fellows have the opportunity to work collaboratively with their mentor and with other fellows and mentors in their cohort and to experience another library environment during a site visit to their mentor's library. The year-long program balances in-person and virtual learning, taking advantage of technology and flexible scheduling to accommodate fellows' ongoing professional careers. One way to measure program results is the number of fellow graduates who have assumed director positions. Another formal qualitative evaluation study of the first three cohorts used focus groups and interviews to collect data from fellows, mentors, home directors, and program initiators. The spread of involvement in AAHSL is indicated by the number of institutions who have participated.

Results: Of the fellows who have completed the program, 19 or 42% have received director positions to date. As the reputation of the program has grown, search committees have sought out graduates as potential candidates. In the qualitative evaluation study focus groups, fellows pointed to enhanced leadership skills and credibility as a director candidate and gaining a cohort of peers who share career aspirations as outcomes of the program. A combination of factors contributing to the success of the program has been identified; these relate to focused purpose and target audience, program design, cohort relationships, and sponsor support and experienced faculty.

Conclusions: The NLM/AAHSL Leadership Fellows Program is a successful model for leadership development. One objective is to offer recognition to emerging leaders and enhance their competitive standing as they pursue director positions. The number

of graduates who have become directors is concrete indication that the goal of the program is being achieved. With the current class, fifty fellows and forty-two different mentors have participated. Fifty-two percent of AAHSL full-member institutions have had a mentor or fellow or have hired a fellow, indicating broad impact. Long-term involvement of AAHSL leadership and NLM, the Future Leadership Committee, and program participants has strengthened the program.

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Changing Our Communication Game Plan

Claire Hamasu, Associate Director; **John Bramble,** Technology Coordinator; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City; **Martha Magee,** Nebraska/Education Coordinator, McGoogan Library of Medicine, University of Nebraska–Omaha

Objectives: When your fan base tells you they have problems with how you communicate with them, it is time to change your game plan. This poster describes how a program covering six states modified its communication plan supporting the professional performance of their fans. Changes in how communication tools are used, increasing interactivity, plus website enhancements will be described.

Methods: The program contracted with a communication firm to perform an audit evaluating how well it communicates with its fans. The program's mission and values determined which audit recommendations would be put into play, then a comprehensive communication game plan was developed. To evaluate the success of the plan, impact factors were measured by how fans interacted with the content, whether they shared the content (via email, twitter, etc.), if they indicated they liked (as in a Facebook "Like") the entry, whether they participated in online discussions, or if they ranked what they read as helpful or not. Use was measured by statistics provided by the social media services (Facebook, Twitter, etc.) along with web trend applications such as Google Analytics and Webalizer.

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Changing Our Game: User Preferences for E-Readers and Tablets

Jeanne M. LeBer, AHIP, Associate Director, Education and Research; **Amy Honisett,** Education Librarian; **Peter S. Jones,** Public Services Associate; **Christy Jarvis,** Information Resources Librarian; **Nancy T. Lombardo,** Associate Director, Information Technology; **Alice Weber, AHIP,** InterProfessional Education Librarian; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objectives: To describe efforts of an academic health sciences library to introduce tablets and e-readers to patrons. To present survey results identifying patron preferences for e-reader and tablet use. To determine how patrons actually use the devices for personal and academic purposes. To inform the decision-making process related to the purchase and provision of the devices, applications, and collection development.

Methods: Librarians purchased twelve e-readers and six tablets to provide patrons the opportunity to experiment with the latest mobile technologies. After several train-the-trainer sessions, librarians shared their knowledge about the devices with the broader health sciences community. Devices were then cataloged and made available for two-week checkout. A limited number of books and apps were purchased and preloaded for all the devices, and patrons were allowed to download their own content as well. In addition, each tablet has Google Books, iBooks, Kindle, and Nook apps available to allow choice in the reading of e-books. Upon return, patrons were asked to complete a ten-question survey to determine preferences for device use including likes and dislikes, apps explored, and preferences. Survey results will be presented.

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Choosing the Right Pitch: Customized Orientation Emails to Incoming Residents and Fellows

Jonathan B. Koffel, Clinical Information Librarian, Bio-Medical Library, University of Minnesota–Minneapolis

Objectives: To investigate if customized orientation emails are more effective than generic orientation emails at directing new medical residents and fellows to library resources and services.

Methods: The author constructed a database that tracked the resources available at each resident's medical school and our equivalent for the resource (e.g., they previously used FirstConsult, we provide access to Dynamed). Half the incoming residents received an email welcoming them with a list of resources at their old institution and links to our equivalents. The other half of the residents received the same email, but the tailored list was replaced by a generic linked list. The author tracked the clicks to each link as well as feedback and requests for consults that arose from each group and used these to gauge the impact of the customized emails.

Results: No significant difference was found between click rates for the customized and uncustomized emails. Most links received between zero and five clicks, with the most hit link (to the library's home page) receiving forty-four clicks. Likewise, there were four email responses in total, with three of the four resulting from customized emails.

Conclusion: While appreciated by some, customized orientation emails do not appear to be a good investment of time and energy.

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Collaboration, Collegiality, Cooperation: Consumer Health Library Services and the American Cancer Society Navigator Role

Carol Ann Attwood, AHIP, Medical Librarian/Registered Nurse, Patient and Health Education Library; **Kay E. Wellik, AHIP,** Director, Libraries; Mayo Clinic in Arizona, Scottsdale, AZ

Objectives: Patients are overwhelmed with the diagnosis of cancer and often do not know where to look for answers, to seek information, or to find community resources to support them. A unique collaborative relationship was forged with the patient and health education librarian/registered nurse and the American Cancer Society navigator that encouraged collaboration to better meet the patient' specific cancer-related needs.

Methods: An interdisciplinary group including physicians, librarians, educators, and administrators met together to determine and plan additional supportive care services for patients and family members facing a cancer diagnosis. Using the patient navigator model used by the American Cancer Society in cities across the nation, the patient librarian and the American Cancer Society navigator worked to collaborate together in the same physical environment to assist patients with accommodations, prosthesis, support groups, and a kiosk with cancer pathfinders to better meet their needs during their cancer journey.

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Connecting Patients to Health Information at the Bedside: Implementing and Managing an Interactive Television and Patient Education System

Cathy Murch, AHIP, Bioinformatician/Systems Librarian, Library; **Holly Sheldon Kimborowicz, AHIP,** Health Science Librarian, Resource Center; Lake Health, Concord Township, OH

Objectives: This poster will describe the experiences of implementing and managing an interactive television and patient education system in a new hospital, including the interdisciplinary relationships and collaborations, benefits, challenges, and opportunities for community hospital librarians using specialized knowledge to expand their expertise and roles with unique and nontraditional library services.

Methods: The resource center/library, staffed by 1.5 librarians, serves 600 physicians, 3,000 team members, almost 1,000 volunteers, patients, families, and community members with 2 acute care community hospitals for a combined total of 374 beds, 15 satellite facilities, and numerous physician offices. This poster will discuss the background information, including how the library became involved with this project; describe the librarian's experiences as project manager; the role and experiences of the librarian's involvement in patient education; the specialized knowledge and expertise the library team brought to the project; the collaboration across a variety of disciplines and cultures; and the benefits, challenges, and opportunities to the library and the librarians.

Results and Conclusions: In 2009, Lake Hospital System underwent major changes including a name change and building a brand new, acute care community hospital. In May of 2009, Lake Hospital System officially became known as Lake Health with the new hospital to be named TriPoint Medical Center The corporate vision for TriPoint Medical Center was to build a patient- and family-centered, technologically advanced, state-of-the-art hospital. The resource center/library was asked by the chief information officer to take over the planning and implementation of the TriPoint Medical Center's interaction television system in June of 2009. The librarians are known for being technologically savvy. The bioinformatician/systems librarian has a computer science background and was designated project manager The project mandate was to have an interactive television system, featuring state-of-the-art options, fully functional and available on opening day, October 21, 2009, for our patients and families. Project management began with haste. The librarians were charged with designing and implementing the content piece of the project and overseeing the completion of the hardware and infrastructure piece of the project already in progress. Timelines and processes were established for physical equipment; rooms were being wired; and equipment and hardware was selected and ordered. A multidisciplinary team (interactive television committee) was formed. The committee was responsible for developing and creating site maps, portal navigation, content including patient education and entertainment, and staff education. One of the largest challenges encountered was continuing to maintain 2 busy full-service medical libraries located at 2 different facilities staffed by 1.5 full-time equivalent librarians with the added responsibility of the interactive television project and the inherent mandates. Interactive television project challenges include ongoing project management, system maintenance, updating, upgrades, and problem management. Financial responsibility of the television system falls largely within the information technologies department with a small portion allocated to the plant operations department; therefore, obtaining financial authorization can be a challenge. We recently experienced the loss of a vice-president who was an active, participating member of the interactive television committee and oversaw the patient education committee; therefore, strategic decision making can be a challenge. Looming on the horizon is implementation of the interactive television system at the second, existing acute care hospital. Benefits and opportunities are plentiful. Project management of the interactive television system and the bioinformatician/systems librarian's computer science background and technological knowledge has led to library involvement in other institutional projects and endeavors including the electronic health record implementation team, project management of the wayfinding system, and the medical staff portal team. The library experienced budget cuts in 2010 resulting in reduced library staff hours. A large benefit from the interactive television project was reestablishing full-time 40 hours per week for the bioinformatician/systems librarian.

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Covering Our Bases: Disaster Planning at an Academic Health Sciences Library

Richard A. Peterson, AHIP, Deputy Director; **Elizabeth M. Berney,** Library Service Desk Manager; **Emma Cryer,** Electronic Resources and Serials Manager; **Karen S. Grigg, AHIP,** Associate Director, Collection Services; **Russell Koonts,** Director, Historical Collections and Archival Services; **Adrianne Leonardelli,** Research and Education Services Librarian and Liaison, School of Nursing; **Eugene Lofton,** Information Services Specialist; **Louis Wiethe,** Document Delivery/Interlibrary Loan Manager; Medical Center Library & Archives, Duke University, Durham, NC

Objectives: The purpose is to describe development of an emergency preparedness and response plan for continuity of services at an academic health sciences library.

Methods: Establishment of a statewide health sciences library disaster plan in 2010 highlighted the need to update and fill in gaps with our library's disaster manual, which was primarily focused on disaster recovery and not service continuity. The National Network of Libraries of Medicine Emergency Preparedness and Response Toolkit was used as a template for our planning, and the institution's director of emergency preparedness was involved early in the project. The library's most important core services and resources were identified, and plans were developed for maintaining access to each of them. Steps for establishing a command center to coordinate implementation of the service continuity plan were also included. Contact information for publishers, vendors, and local support was compiled. To help simulate an actual disaster and prepare staff, multiple scenarios were developed to describe actions that would be taken in response to disasters with increasingly severe impact.

Results: Planning completed at the local level successfully prepared the library to maintain access to core resources and services, and complemented the existing statewide plan.

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Depositing Intellectual Property into an Institutional Depository

Merle Rosenzweig, Librarian; **Anna E. Schnitzer,** Librarian; Taubman Health Sciences Library, University of Michigan–Ann Arbor

Objectives: The objective was to discover an efficient method of promoting our unpublished posters and presentations as well as to retain them permanently with easy accessibility as necessary.

Methods: Deep Blue, the online depository in which deposited materials receive a permanent uniform resource locator (URL) and which is easily searchable, was the method that allowed us to best meet our objective. We tested this plan by first depositing three posters that were presented at the annual meeting of the Medical Library Association (MLA) in Minneapolis in 2011, and then creating a business size card with the titles of each poster, the numbers assigned in the MLA display area, and the URL.

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Digitization of the Aristides Agramonte Collection on Yellow Fever

Maureen M. Knapp, AHIP, Assistant Librarian/Assistant Professor, John Ische Library, Louisiana State University Health Sciences Center–New Orleans

Setting/Participants/Resources: Louisiana State University (LSU) Health Sciences Center-New Orleans, John P. Ischè Library, with cooperation from BackStage Library Works (a digitization vendor), CONTENTdm (digitization software from OCLC), and the National Networks of Libraries of Medicine, South Central Region (NN/LM-SCR).

Brief Description: This project was funded through a 2010 NN/LM-SCR Historical Preservation and Digitization Award. This project aimed to digitize rare books and journals identified as the first materials acquired for the LSU medical school library. The books belonged to Dr. Aristides Agramonte, a prominent pathologist who served in the US Army with Dr. Walter Reed during the yellow fever expedition to Cuba. Researchers who are interested in the history of medicine, yellow fever epidemics, tropical medicine, and the development of the first scientific theory used to trace and find a cure for a communicable disease will find a special interest in this collection. The poster will describe the project timeline and work flow, lessons learned from outsourcing digitization projects, and usage statistics. Interesting works from the collection will also be highlighted.

Results/Outcome: The Aristides Agramonte Yellow Fever Collection now offers public access to over 130 books and journal articles dating back to the 1790s via the Louisiana Digital Library consortium (www.louisianadigitallibrary.org/cdm4/browse.php?CISOROOT=/LSUBK01).

Evaluation Method: Statistics from the Louisiana Digital Library will explore usage since the collection's creation.

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Distributing Relevant Information to a Remotely Located Clinical Department of a Medical Center

Merle Rosenzweig, Librarian; **Katy Mahraj,** Student; Taubman Health Sciences Library, University of Michigan–Ann Arbor

Objectives: A liaison librarian was newly assigned to highlight library services and resources to the staff members of a clinical department in an offsite branch of the university's health system with the goal of effective distribution of this information in timely fashion.

Methods: The librarian scheduled regular office hours at the distant site semimonthly and, with the assistance of a graduate student from the school of information, produced and emailed a monthly newsletter, each issue focusing on a different resource or service.

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Does Using New Equipment (Tablets) Affect the Outcome of the Game?

Mary Edwards, AHIP, Distance Learning and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; **Linda Butson, AHIP,** Consumer Health and Community Outreach Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Beth Auten, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; University of Florida–Gainesville

Objectives: This poster describes the evolution and evaluation of a clinical rounding information service begun in 2010. The introduction of tablet computers provided the opportunity to assess the efficiency of point of need searching, compare the effectiveness of and clinician satisfaction with the service pre- and post-tablet implementation, evaluate and compare tablet capabilities, and assess tablet use in training clinical librarians.

Methods: Using two tablet platforms, iPad and Motorola XOOM, to provide point-of-care information services, this project evaluates the impact of tablet computers on rounding compared to a 2010 pilot project where searches were brought back to the library. Evaluation methods assessed the usefulness of tablets in answering real-time questions, the effectiveness of the clinical rounding information service, and the impact tablets had on training of librarians to provide point-of-care services. Quantitative and qualitative data collected include information from the clinicians about the efficiency and quality of the service and their perception of how the tablets influenced service provision and patient care, and information from the librarians about the usability of the tablets and their impact on service provision and how librarians new to rounding experienced the process. Opportunities for further collaborations will be reported.

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Essential Nursing Resources: Premier Product of the Interagency Council on Information Resources in Nursing

Janet G. Schnall, AHIP, Information Management Librarian, Health Sciences Library, University of Washington–Seattle; **Susan A. Fowler,** Medical Librarian, Bernard Becker Medical Library, School of Medicine, Washington University in St. Louis, St. Louis, MO

Objectives: Describe publication of the 26th edition of the Essential Nursing Resources (ENR), an annotated list of print and e-resources to support evidence-based nursing practice, education, administration, and research activities, and a collaborative effort of the Interagency Council on Information Resources in Nursing (ICIRN) representatives.

Methods: ICIRN is a nonprofit, voluntary group of organizations concerned with providing and improving access to library

and information resources and services for all nurses. Member organizations include: Medical Library Association (MLA), National Library of Medicine (NLM), American Nurses Association (ANA), (National League for Nursing (NLN), American Medical Informatics Association (AMIA), Nursing Informatics Working Group, and many more. MLA appoints two allied representatives to ICIRN to serve three-year terms. One of the premier products of ICIRN is the ENR, which can be used by nurses and librarians for clinical information seeking, evidence-based nursing practice, professional/academic research, and nursing collection development, and as a teaching tool.
Results: The latest edition of the ENR is now available on the ICIRN website (www.icirn.org/Homepage/Essential-Nursing-Resources/default.aspx). New sections in 26th edition include "Evidence-Based Nursing" and "Management." There is also a key next to each resource indicating when a fee is required and the availability of the resource as mobile, online, or in print.
Conclusion: The ENR is an excellent example of nurses and librarians collaborating to promote information literacy for nurses.

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Evaluating the Impact of Altmetrics

Drew Wright, Research Librarian, Weill Cornell Medical Library, Weill Cornell Medical College, New York, NY
Objectives: Librarians, publishers, and researchers have long placed significant emphasis on journal metrics such as the impact factor. However, these tools do not take into account the impact of research outside of citations and publications. Altmetrics seek to describe the reach of scholarly activity across the Internet and social media to paint a more vivid picture of the scholarly landscape.
Methods: In order to examine the impact of altmetrics on scholarly activity, it is helpful to compare these new tools to an existing method. Citation counts are currently the standard for determining the impact of a scholarly work, and two studies were conducted to examine the correlation between citation count and altmetric data. First, a set of highly cited papers was chosen across a variety of disciplines, and their citation counts were compared with the altmetrics generated from Total-Impact.org. Second, to evaluate the hypothesized increased impact of altmetrics on recently published articles, a set of articles published in 2011 were taken from a sampling of journals with high impact factors, both subscription-based and open access, and the altmetrics were then compared to their citation counts.

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Exploration of the Use of iPads in Medical Education

Joanne Rich, Information Management Librarian; **Leilani A. St. Anna, AHIP,** Information Management Librarian; Health Sciences Library, University of Washington–Seattle
Objectives: Since the introduction of the larger format handhelds (tablets) such as the iPad, medical students have many options for mobile computing. This poster will report on the University of Washington Health Sciences Library's (HSL's) participation in a University of Washington School of Medicine (SOM) project that investigates the potential uses and benefits of tablet devices in the curriculum.
Methods: In June 2011, the SOM convened a group of interested faculty, staff, and students, including the two librarian co-liaisons to medical students, to investigate issues with the acquisition, distribution, and evaluation of a small number of tablet devices. The SOM issued the devices to first- and second-year students for personal and school-related use for a one-year trial to assess the utility of that format as required equipment for all students. The investigating group met ten times during summer 2011 to discuss device requirements, productivity and medical apps, library resources, and security issues. The librarians led discussions on library resources, surveyed schools that use slate devices and tested a device for compatibility with e-textbooks and resources. The co-liaisons also created a guide listing required or recommended medical texts and pointers to high-quality apps or mobile-friendly resources.
Results: Fifteen iPads and five Samsung Galaxy (Android) tablets preloaded with annotation apps were distributed to students. Students provided feedback toward the end of the fall quarter indicating positive cost and convenience benefit of the tablets through access to library-provided online textbooks. This benefit was supported by notably increased traffic to the library guide during the pilot. Using information from this experience, the HSL has successfully acquired funding to provide librarians with tablets in support of education. The HSL has also explored issues such as printing from iPads and been sensitized to update the content on the library guide to include newly acquired multimedia content that supports medical student learning.
Conclusions: Participation in this SOM exploratory group has been advantageous to the HSL liaisons in several areas. Liaisons have become more involved with SOM than in the past. This increased involvement with SOM has made it easier to assess user needs. Additionally, HSL has recognized tablet development and use in education as a priority.

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Family Physicians Inquiries Network (FPIN): Connecting with Faculty, Residents, and Medical Students

Fran E. Kovach, AHIP, Reference and Education Librarian, Medical Library, School of Medicine, Southern Illinois University–Springfield; **Careyana Brenham,** Associate Professor, Clinical Family and Community Medicine, School of Medicine, Southern Illinois University–Carbondale; **Carol Gordon, AHIP,** Research Assistant Professor, Information and Communication Sciences; **Rhona Kelley, AHIP,** Head Research Assistant Professor, Information and Communication Sciences, Medical Library; **Connie Poole, AHIP,** Associate Dean, Information Resources; School of Medicine, Southern Illinois University–Springfield
Objectives: The Family Physicians Inquiries Network (FPIN) consortium (www.fpin.org) provides scholarly publishing opportunities for family medicine faculty, residents, medical librarians, and medical students. FPIN's purpose is to make evidence-based information more accessible to family physicians. FPIN's publications range from Clinical Inquiries (CI) written by faculty and librarians to HelpDesk Answers (HDAs) written by residents, and finally, eMedRefs, researched and authored by medical students.
Methods: The family medicine department is a member of FPIN. Faculty choose clinical inquiry topics and partner with medical librarians in researching and writing articles for publication. Resident physicians participate in the national resident research committee scholarly activity program. Residents meet with the FPIN librarian to discuss their topic and attend a session on evidence-based resources. The residents write HDAs, submit them to FPIN, and present them to faculty at the end of the year.

The "Publishing Evidence-Based Information for the Smart Device" elective allows medical students to practice searching skills and writing abilities by publishing an FPIN eMedRef. Librarians teach database searching, bibliographic management, and copyright. Working with faculty, a topic is chosen and copy is written and submitted for acceptance. The student presents the eMedRef at the end of the elective.
Results: From 2007–2012, the FPIN librarian and faculty co-published six CI articles in the *Journal of Family Practice* and *American Family Physician* journal. Four more manuscripts are currently in peer review. The residents completed eighteen HDA editorial reviews and eight peer reviews. The medical students in the "Publishing Evidence-Based Information for the Smart Device" elective will complete their eMedRefs in May 2012.
Conclusions: The FPIN publication process is ongoing and requires many rewrites, edits, and protocol updates. Publishing FPIN CIs helps faculty meet scholarly publishing requirements needed for tenure. Residents who write HDAs meet the requirements of the residents research committee. eMedRef publications increase medical students' literature searching and writing skills, as well as provide them with scholarly publications for their residency applications. All authors gain a better understanding of the publishing process and increased knowledge in the areas of their publications. All of these publications have an impact on patient care and safety.

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Getting in the Game: A Health Literacy Tutorial Home Run
Peter S. Jones, Public Services Associate; **Alice Weber, AHIP,** InterProfessional Education Librarian; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City
Objectives: Health literacy awareness is crucial to interprofessional collaboration and improved patient outcomes. The University of Utah has a strong commitment to health information literacy. In support of this commitment, a one-hour tutorial was proposed to introduce the concept and importance of health literacy to all health sciences students. This poster will share the process, success, and challenges of creating this tutorial.
Methods: An Education Subcommittee of the University of Utah Health Literacy Interest Group created an online health literacy tutorial to be used in providing students across four health care professions with baseline knowledge of health literacy. This mandatory tutorial was codeveloped and is hosted by the Spencer S. Eccles Health Sciences Library in the university's course management software, Canvas. Librarians serve as discussion forum leaders, guide interprofessional discussions on key health literacy topics, and interface with instructors of foundational courses in each health sciences college who confirm completion and give course credit.
Results A white paper developed by the education subcommittee gives framework and guidance for incorporating health literacy throughout all curricula in all departments. This self-paced online tutorial is the first step in this process, producing greater awareness of health literacy concepts to all health sciences students, and emphasizing the importance of health literacy on health outcomes in professional practice. The one-hour tutorial is being piloted during spring and summer semesters and will be required of all new health sciences students beginning fall semester of 2012.
Conclusions: This tutorial gives baseline knowledge of the topic and in line with the white paper, encourages continued emphasis on health literacy throughout each degree program in our health sciences. The process of creating the health literacy tutorial was both challenging and rewarding. Obtaining consensus among different departments, some with broad and global perspectives and some with clinical and practical perspectives, helps to make this valuable for all departments involved.

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Gray Literature Searching in Health Sciences Systematic Reviews: A Survey Study
Ahlam Saleh, Reference Librarian, Health Sciences Library System; **Melissa A. Ratajeski,** Reference Librarian, Health Sciences Library System; **Marnie Bertolet,** Assistant Professor, Graduate School of Public Health; University of Pittsburgh, Pittsburgh, PA
Objectives: To determine if the characteristics of a systematic review or of an individual searcher impact the type of resources or the time spent searching gray literature.
Methods: An internal review board-approved survey was distributed to searchers embarking on a new systematic review. Participants were recruited through various means including email discussion lists, social media, and email contacts. Subjects were excluded if searching for the systematic review was underway or completed at the time of study enrollment. The survey was administered in two parts: one that captured characteristics of the searcher and the other that captured characteristics of the systematic review, time spent searching, and the resources used in the review. Data analysis consisted of categorizing the listed resources as either a gray literature resource or non-gray literature resource, using the 1997 Luxembourg expanded definition of gray literature. Further analysis included comparison of outcomes using Kruskal-Wallis (KW) and Fisher's exact test (FE).

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Growing Our Opportunities: Getting to First Base: Implementing the Infobutton for the Library
Connie Schardt, AHIP, FMLA, Associate Director, Research and Education Services; **Megan von Isenburg,** Associate Director, Research and Education Services; **Emily Mazure, AHIP,** Biomedical Research Librarian; Medical Center Library & Archives, Duke University, Durham, NC
Objectives: To test the feasibility of adding the Infobutton to the electronic health record (EHR) and to the library's website as a way to demonstrate its purpose.
Methods: After hearing a presentation about the Infobutton, staff decided to investigate the feasibility of implementing the technology in the EHR. As a first step, we decided to create a working prototype that would be web-based and run from our library website. This would (1) give us time to work with the selected resources and application program interface (API) to properly configure the links in context, (2) provide us with a platform to be able to demonstrate the system to information technology (IT), and (3) provide our medical students with a "federated" search engine to help identify the best clinical resources to answer their background questions. We are in phase one of the project. This poster will explain the Infobutton project; our partnership with IT, the configuration process, and next steps.

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Health Literacy in an Adult Learner Population

Rachel K. Nash, Student, Certificate of Advanced Study in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Youth Services Librarian I, South San Francisco Public Library, Daly City, CA

Objectives: Changes proposed by the Patient Protection and Affordable Care Act will make it necessary for every American citizen to acquire health insurance. Many adults with low literacy may find it difficult to obtain health information and locate insurance plans. This study seeks to determine the health literacy and information needs of adult learners and other adults in San Mateo County, CA.

Methods: Personal communication with workers from Project Read, an adult literacy organization in San Mateo County, revealed that many of the program' adult learners do not have adequate health insurance and do not know how or where to obtain affordable coverage. Furthermore, many adult learners might not be able to accurately read and apply published health information such as that found in public health announcements, nutrition and medicine labels, and consumer health books and pamphlets. To determine the health literacy of local adults, a short survey was distributed through email and the US Post Office to forty-two learners and twenty tutors from Project Read. Tutors filled out the questionnaires and helped their adult learners complete the same survey. Questions ranged from overall health literacy, information-seeking behavior, and health insurance coverage. Eleven tutor surveys and nine learner surveys were returned, then tabulated and analyzed to determine participants' health literacy and information needs.

Results: Overall, the survey responses corresponded with the results of national studies regarding health literacy: 44% of the adult learners surveyed lacked health insurance, while only 9% of the tutors lacked coverage. Of the adult learners lacking health insurance, 75% responded that they could not afford health insurance. Adult learners were more likely to consult family, friends, and the Internet when faced with medical questions, sickness, or injuries, while tutors usually consulted doctors. The majority of adult learners did not know anything about health care reform, and none of them had heard of the individual mandate, while almost all of the tutors knew about health care reform, and 45% could describe the individual mandate. Younger adult learners with less education were more likely to lack health insurance, consult inadequate sources of medical information, and know little about health care reform. However, all of the adult learners and tutors responded that they consult pharmacists or doctors when they do not understand medicine labels or medical instructions.

Conclusion: As hypothesized, adult learners generally had lower health literacy than tutors. Adult learners in the San Mateo County need increased access to affordable health insurance plans in order to obtain adequate medical information and health care. Furthermore, both adult learners and tutors would benefit from learning more about the Patient Protection and Affordable Care Act, especially regarding the individual mandate. Local organizations such as Project Read can help improve the health literacy of San Mateo County citizens by connecting individuals with sources of information about affordable health insurance and health care reform.

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HINARI Training: A New Free, Interactive, and Accessible Tutorial with the Hopes of a Community-Sourced Future

Megan von Isenburg, AHIP, Associate Director, Research and Education Services, Medical Center Library & Archives; **Marc Alan Sperber,** Educational Technologies Consultant, Duke Global Health Institute; Duke University, Durham, NC

Objectives: Many institutions are working collaboratively with global health partners. One way librarians can offer support is to inform partners about existing resources, such as HINARI. At present, most HINARI training is either live or created for trainers, not end users. This project sought to design a freely available, patron-oriented tutorial on using HINARI that is accessible online and in low-bandwidth settings.

Methods: Two staff members from a US academic institution, a medical librarian and an instructional designer, collaboratively created this tutorial after traveling to a partner institution in sub-Saharan Africa. While leading HINARI and PubMed training sessions and individual consultations, the staff observed that students, faculty, and residents had low awareness of and skills in using HINARI. The tutorial was thus designed to include basics about HINARI access and usage, including how to search PubMed via HINARI. The site can be used in low-bandwidth settings and offers cost-free options to download the training and to order it on CD-ROM. The training offers video, audio, text transcripts, self-assessment quizzes, exercises, and a glossary of key terms. Consideration was given to the need for up-to-date content. Next steps involve evaluating feedback and building a community to manage and update the site beyond the pilot period.

Results: An initial extensive evaluation was conducted by 19 students, trainees, and staff, mostly from Tanzania, in July 2011. Feedback from this evaluation rated the training site highly for educational factor, ease of use, and breadth of content. Comments indicated that downloading and CD-ROM options are necessary in settings with low bandwidth and other technical difficulties. The site went live in September 2011. As of February 2012, there have been 1,215 unique visitors to the training. Visitors are represented from 123 countries around the world. Eighty orders for CD-ROM versions of the training have been requested, and the average number of trainees expected to train per CD is 60. This could mean approximately 4,800 people will be trained via the CDs already ordered.

Conclusions: Maintaining the currency of the training site requires coordination with the World Health Organization (WHO) and HINARI trainers. Next steps include involving additional HINARI trainers as content creators and site maintainers, crowdsourcing subtitle translation, and soliciting more feedback to improve the instructional design and content.

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Improving an Outreach Service through Analysis of Health Information Disparities as Related to Socioeconomic Indicators Using Esri ArcGIS

Yvonne M. Socha, Graduate Student, Information Science; **Sandra I. Oelschlegel, AHIP,** Director and Assistant Professor, Preston Medical Library; **Cynthia J. Vaughn, AHIP,** Clinical Information Librarian/Assistant Professor, Preston Medical Library; **Martha F. Earl, AHIP,** Assistant Director and Assistant Professor, Preston Medical Library; University of Tennessee–Knoxville

Objectives: To improve consumer and patient health information service (CAPHIS) outreach services by creating choropleth maps using geographic information systems (GIS) that display both the rate of calls to a CAPHIS and the socioeconomic factors of age, poverty, and disability in east Tennessee in order determine health information disparities in discreet geographic areas.
Methods: An existing database of CAPHIS calls was queried by zip code for the period from June 30, 2009, to July 1, 2011. Using Esri ArcGIS, the queried zip codes were geocoded and plotted as unique points on a Tennessee county shapefile. Next, socioeconomic data from the US Census Bureau for age, poverty, and disability was imported and converted into choropleth representations on the map by county and layered over the rate of calls.

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Information Literacy and the Doctor of Nursing Practice Student
Claire O. Sharifi, Student, Certificate of Advanced Studies in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Reference Librarian, Gleeson Library/Geschke Learning Center, University of San Francisco, Alameda, CA
Objectives: This survey will explore the information literacy skills and instruction needs of first-year doctor of nursing practice students at the University of San Francisco. Students in the doctor of nursing practice program are expected to have the research skills required to practice evidence-based nursing, yet their research, computer, and electronic database experience is varied. This survey will evaluate students' information literacy skills and collect information on factors that contribute to information literacy competency, including highest educational degree obtained prior to starting the doctor of nursing practice program, prior information literacy instruction, and prior research experience. Results will allow the library to better meet the information literacy instruction needs of doctor of nursing practice students.
Methods: A cross-sectional survey administered to nineteen first-year doctor of nursing practice students enrolled in a required class.

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iPad Lending Library for On Call/Night Float Residents: Home Run or Foul Ball?
Catherine M. Boss, AHIP, Coordinator, Library Services; **Chunwei Ma,** Systems Librarian, Booker Health Sciences Library; Jersey Shore University Medical Center, Neptune, NJ
Objectives: A pilot study was conducted to determine the usefulness of an iPad for independent learning and direct patient care by on-call/night float residents. An iPad with WiFi would allow for connectivity to the medical center's patient care portal with licensed patient-based and evidence-based databases, electronic books, and journals.
Methods: The library purchased eight iPads with peripherals. The iPads were loaned out for one-week time intervals to residents in internal medicine, pediatrics, and obstetrics who had on-call/night float rotation. At the end of each borrowing period, each resident was asked to complete an online evaluation survey. Residents who did not borrow an iPad, as well as the respective faculty preceptors, would be surveyed at the end of the project in December, and the data collected used for comparison purposes. Analysis of the survey results would be done to determine the residents' reaction and use of the iPads for independent learning and for use in direct patient care while on call. The library staff will ask each faculty preceptor for these respective house staff to also evaluate the effectiveness of the iPads as a teaching or study modality.
Results: Residents used the iPads primarily for research and direct patient care and secondarily for leisure and educational support. The iPads were only used for board review by a third of the residents. The speed and usability of the iPads in the clinical setting proved to be their biggest barriers/obstacles.
Conclusions: An iPad can be an effective tool for independent learning and direct patient care by on-call/night float residents provided the clinical setting is WiFi enabled. A device similar to the iPad but more portable would be better suited for residency.

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Is Attendance Really Declining at Games?: An Analysis of Walk-ins Versus Web Counts
Travis Clamon, Technology Services Assistant, Quillen College of Medicine; **Nakia Woodward,** Clinical Librarian, Quillen College of Medicine Library; **Rick Wallace, AHIP,** Assistant Director, Quillen College of Medicine Library; East Tennessee State University–Johnson City
Objectives: The purpose is to see if there is a relationship between declining walk-in visitor counts and increased library web access. The overall objective is to evaluate library services and find better and more efficient ways to meet the needs of walk-in and virtual patrons.
Methods: Compile past five years of walk-in visitor statistics from the library. Retrieve past five years of website statistics from Google Analytics. These two sets of data will be compared and analyzed for any correlation. We hypothesize the data will show a steady decrease in walk-in visitors along with a continued increase in website visitors. We hope to find a period during the past five years where the two values intersect. If a clear relation exists, we will identify possible factors that can be attributed to these changes.
Results: The combination of online "visits" combined with walk-in visits gives an entirely different picture of the use of libraries by patrons.
Conclusion: Librarians should not be wedded to success markers of past eras. By updating measures of recording "attendance," a more truthful picture emerges about the true popularity of libraries. This type of data is essential, since libraries are under more pressure to justify their existence.

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It's a Matter of Inches: Using Statistics to Improve a Copyright Image Guide
Kevin A. Caslow, Reference Image Assistant; **Rienne Johnson,** Reference Librarian; **Beth Layton, AHIP,** Director; Oliver Ocasek Regional Medical Information Center, Northeast Ohio Medical University–Rootstown
Objectives: Copyright laws have yet to integrate into the digital world. To assist the campus with copyright compliance for online images, librarians created a guide to help users locate educational use and other permissible images (e.g., Creative Commons licenses). Guide statistics will be analyzed to assess usage and to determine what topics need revision to better meet users' needs.
Methods: The library image guide was launched in July 2011 to provide users with a directory of permissible images for course

lectures. The guide is separated into four basic areas: general, basic sciences, clinical medicine, and pharmacy, with subdivisions for specific research areas to facilitate access for specialty topics. Librarians will employ statistical analysis with data gathered from Google Analytics and the LibGuides usage statistics. Data will include page and link usage statistics, referring pages, time spent on pages, and outbound pages. This data will inform which subject areas are widely used, the most and least popular links, how users found our resource, and the number of unique page views. This data will provide librarians with the necessary tools to meet our goal for the image guide, which is to guide users to permissible images when they need them.
Results: Statistics show that the image guide is one of Northeast Ohio Medical University's (NEOMED's) most popular library guides, having 694 total and monthly average of 138 visits. The guide was developed by our image assistants, based on faculty image needs in previously audited presentations. The guide is most popularly accessed via a direct link or from the NEOMED library site. The highest usage came at the semester's start, but the following decrease was not as drastic as anticipated. "General Image Sites" and the image citation guide are essential components of the copyright response, as the most popular pages of the image guide. Usage data graphs illustrate the long tail effect, confirming the need for most resources. Users are visiting the site for resources and finding needed information as well. However, continued audit receipt and citation requests illustrate that the service has not reached saturation point yet, primarily due to the high number of off-campus faculty.
Conclusions: The lack of usage in particular subject areas was a surprise. Previous audits showed that specific clinical images were the most needed by faculty. Consequently, the guide was intentionally designed by subject areas. Low usage may be attributed to faculty using preferred sites or using images from required textbooks, or the directory may not include the image types required by the faculty. Development has thus far been based on image topics reviewed in audited presentations, leaving a resource gap for non-audited areas. Next steps for the image service are to provide targeted education and marketing to faculty about available copyright resources. This education and marketing should help inform image needs in non-audited areas and bring to light further unanswered copyright questions.

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Knowing the Score: Are Students Interested in Utilizing Online Lectures on Basic Sciences and Biomedical Topics?

Annie M. Hughes, Information Services Librarian, Wilson Dental Library, University of Southern California–Los Angeles

Objective: To investigate students' interest in and need for online lectures on basic sciences and biomedical topics at the Ostrow School of Dentistry of the University of Southern California.
Methods: In 2010, a first-year DDS student approached the library with an idea to purchase online lectures via a website called, Dr. Najeeb Lectures. The lectures outline topics in basic sciences and biomedical topics; however, the resource cannot be licensed for library use. Because students participate in a problem-based learning (PBL) curriculum, they do not have formal lectures but instead gain knowledge from facilitated cases with particular learning objectives. In mid-2011, a four-question survey was sent to first-year DDS students to gain information about online lecture usage. In response to the first-year student's request and the survey results, the library and a team from Ostrow School of Dentistry also approached the Keck School of Medicine of USC to see if their online lectures could be offered to DDS students. Keck gave access to three online lectures, and the Wilson Dental Library held two focus groups with students.
Results: Out of 144 students, 80 students responded to the online lecturing survey. Of the 80 respondents, 77 said they utilize online lectures. When asked what the primary use for these lectures is, 95% of the 77 said "Preparation for exams," 20% said they use lectures to "Avoid using textbooks," 78% said they use lectures as a supplement to the PBL curriculum, and 82% said they use the lectures to gain an overview of certain topics. When asked if they would view lectures if the school were to videotape them, 91% of the respondents said yes. Results of focus groups show students felt lectures provided by Keck were too focused on cases geared toward medical students. They felt general lectures would be more useful. Focus group sessions reinforced that students like to refer back to content and find that supplementary online lectures are useful when participating in a PBL curriculum.
Conclusions: From the standpoint of Ostrow School of Dentistry of USC, the survey gave the school motivation to investigate recording their own lectures and offer them to students as supplementary material. The use of the Keck School of Medicine lectures unfortunately did not prove to be useful, so other options must be investigated. For librarians, the survey and the focus groups provided information regarding the need for online supplementary material. It would be interesting for librarians to investigate preferences of incoming medical and dental students to learn whether or not online lecturing and online tutorials are now expected to be made available as resources, as opposed to just traditional lecturing accompanied by a textbook. Because of the results of this survey, the library decided to increase the amount of online tutorials and online supplementary materials available to students since it is a format students find useful.

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Letting the Fans Direct the Game: Establishing a Graduate Student Advisory Committee for an Academic Health Sciences Library

Emily M. Johnson, AHIP, Education and Research Librarian;
Shannon D. Jones, AHIP, Associate Director, Research and Education Services; Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond

Objectives: This poster describes the process our library followed to establish a library advisory committee for health sciences graduate and professional students. Our overall objective was to facilitate improved communication between students and the library.
Methods: One of our library goals is to ensure our users have excellent experiences using our physical spaces, services, and collections. To assess whether we are meeting this goal, we turned to our largest patron base: students. When feedback was needed previously, ad hoc focus groups were created. By forming the Graduate Advisory Committee (GAC), our library has a readily accessible group to provide feedback on library policy, planning, and operation. The GAC membership includes two representatives from the five health sciences schools on campus. Members were selected by an application process. One-hour GAC meetings are held monthly over lunch from September to May. Each meeting features an invited speaker and/or discussion about a particular library policy, resource, or programming. Time is allocated for

providing feedback or suggestions and raising any concerns the student have. A blog utilized to disseminate information between meetings.
Results: The GAC allowed the library to form new alliances and accountability with our student users. Through this relationship, we gained outspoken advocates for several initiatives at the library. Student members were able to directly see the library's integral role in an academic health sciences campus. In turn, the library responded by adding resources to enhance the students' study practices and comfort while in the library. Without this channel of communication, the library administration would not have been aware of that these services were needed or changed policy to enhance the students' experiences at the library.
Conclusion: The creation of the GAC was an effective method to reach out to students for feedback and accountability on library policy, planning, and operation.

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LibGuides: Developing Custom Research Solutions for Our User Community

Donna S. Gibson, Director, Library Services; **Antonio Derosa,** Assistant Reference Librarian; **Marisol Hernandez,** Senior Reference Librarian; **Sarah Jewell,** Reference Librarian; **Isabel Sulimanoff,** Senior Reference Librarian; MSKCC Library, Memorial Sloan-Kettering Cancer Center, New York, NY
Objectives: To establish a customized service leveraging the Springshares' LibGuides platform to develop a variety of templates that will inform, promote, or share content. Our user community and their research activities are instrumental in providing the direction and subject matter in building these custom research solutions.
Methods: LibGuides is a Web 2.0 content management and publishing tool that allows the reference staff to create subject guides, training modules, information portals, and promotional and current awareness pages delivered in an easy-to-view format to interested user groups. Our user community can submit an online request for a LibGuide. In addition, the reference team takes a proactive role in developing appropriate guides based on the research and medical interests of our various client segments. We address individual needs with alternative methods. As the number of LibGuides increases, we will ensure that a maintenance schedule is established so that we can deliver relevant information in a timely manner.

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Library Services in Health Care Societies and Associations in the United States and Canada: A Survey Conducted by the Health Association Libraries Section of the Medical Library Association

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Objectives: This is the ninth survey, since 1955, of health association libraries. The objective of the survey is to determine if these libraries are growing, shrinking, or remaining stable, as well as to assess the library environment, collections and resources, services, and promotion. Results will be useful to both the section and individual librarians.
Methods: The survey team first prepared a list of 195 targeted organizations, based upon current and past section membership, responses to prior surveys, MEDLIB-L messages, surveying key section members, and searching the Encyclopedia of Associations. The team next drafted the survey instrument, incorporating some prior survey questions and new ones that reflect changes in technology and expanded library responsibilities. The team entered the 41-question survey into SurveyMonkey and tested it with three section members who were not part of the survey team. The survey uniform resource locator (URL) was promoted through 5 key email discussion lists, and survey team members contacted targeted organizations individually that had not responded by the deadline. Results were compiled, analyzed, and compared to results from prior surveys. Results will provide section members with benchmarking data and ideas for planning future section activities.
Results: We received responses from 83 organizations (42.3% response rate). Of the responders, 23 (27.7%) had no library and 60 (72.3%) had a library. Fifty-four of these 60 responders (90%) answered all of the survey questions. In 1996, we contacted 170 organizations; we received 80 responses (47.1% response rate), with 50 responders having libraries (62.5%) and 30 (37.5%) with no libraries. In 2003, we contacted 193 organizations; we received 76 responses (39.4%), with 48 responders having libraries (63.2%) and 28 (36.8%) with no libraries. Our poster will include charts, tables, and word clouds to illustrate key findings from our analysis of the 2011 results. Additional findings will be posted through the Health Association Libraries Section (HALS) website (www.hals.mlanet.org).
Conclusions: Overall health association libraries are holding steady and doing more with less. Responses were "stayed about the same" for staffing (53.3%), budget (46.7%), and space (56.7%), with "increased" for both volume of services (51.7%) and complexity of services (61.7%). Ninety percent did not anticipate library downsizing or closure, and only 18.5% of responders outsource any services; 37.5% of responders with no current library services noted that an existing library had closed since 2003. Risk factors for library closure included budget cuts, reorganization, leadership changes, new priorities, moving, and librarian retirement. Our results show a trend away from librarians working in a physical library. Responders mentioned virtual libraries, electronic library systems, and all online services, with and without librarian management. Librarians without a physical library manage their parent organization's website or online knowledge center or provide sophisticated research services.

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Living the Life of a Public Health Professional: Lessons Learned from Immersion in Public Health Practice

Kathleen A. Amos, AHIP, Project Manager, Council on Linkages Between Academia and Public Health Practice, Public Health Foundation, Washington, DC; **Jacqueline Peery,** Coordinator, Admissions and Alumni Affairs, School of Public Health, San Antonio Regional Campus, University of Texas–Houston, San Antonio, TX

Objectives: To explore knowledge and skills gained regarding the work and information needs of public health professionals through immersion in the public health practice environment and consider the potential impact for the delivery of health sciences information services.

Methods: One of the most effective ways to learn about professional workflows and information needs in public health practice is to experience the working environment directly through immersion in the field. Two health information professionals engaged in immersive experiences by filling positions in public health practice organizations over the past year. Embedding occurred within a small, national nonprofit organization and a large, metropolitan public health department. Knowledge gained about the public health workforce, skills related to public health practice, and implications for effective delivery of information services to this population are considered to assist health information professionals with seizing opportunities to grow their services to public health professionals.

Results and Conclusions: Working in public health organizations offered an opportunity to explore firsthand the knowledge and skills needed to effectively deliver information services to public health professionals. This was accomplished through various activities, such as coordinating a learning community, supporting educational experiences, assisting with research, assessing workforce development needs, and promoting stronger connections with academic and public library systems. The diverse structure of the public health system and composition of the public health workforce necessitates information services that are flexible, accessible, and relevant to audiences in a variety of professions and with differing educational backgrounds. Professionals practicing in each of the core disciplines of public health—biostatistics, epidemiology, environmental science, social and behavioral sciences, and health policy and management—have unique information needs. Opportunities exist for increasing access to literature and other information resources in support of evidence-based practice, as well as building awareness of the potential contributions of information professionals to public health education, research, and service.

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New Opportunities in Managing Electronic Resources

Christy Jarvis, Information Resources Librarian; **Alice Weber, AHIP,** InterProfessional Education Librarian; **Peter S. Jones,** Public Services Associate; **Joan Gregory, AHIP,** Associate Director, Information Resources and Facilities; Spencer S. Eccles Health Sciences Library, University of Utah–Salt Lake City

Objectives: The aim of this study was to evaluate available electronic resource management (ERM) systems and identify and implement one that most closely matched institutional requirements.

Methods: Library staff members at a mid-sized academic health sciences library analyzed existing e-resource management practices in order to identify critical needs that were not being met. With a requirements list compiled, we then assessed and ranked ERM solutions according to their ability to handle: (1) work flow, (2) license and access rights, (3) usage statistics, (4) publisher administration information, and (5) budget details. Consideration was given to each product's ease of implementation and interoperability with existing data systems, along with the cost to purchase, install, and maintain the e-resource management system.

Results: Both commercial and open source ERM options were evaluated for their ability to fulfill identified needs. Budget constraints eliminated vendor-supplied solutions from consideration. Of the open source options evaluated, the Centralized Online Resources Acquisition & Licensing (CORAL) system, developed by Notre Dame, emerged as the best fit for the Spencer S. Eccles Health Sciences Library's requirements. All existing CORAL modules were installed on a library server in December 2011, and data population began shortly thereafter.

Conclusions: A well-designed ERM solution offers superior functionality to the library's previously implemented ad hoc method of managing electronic resources. A needs-driven approach, whereby functional requirements were identified and ranked prior to evaluating ERM options, allowed library staff to come to a clear consensus on the best solution for our institution.

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One Design to Rule Them All: Harnessing Competing Brand Guidelines to Create a Unified Vision for a Library Website

Linda O'Dwyer, Communications Coordinator and Education Librarian; **James Brucker,** Instructional Design Librarian; **Michelle Frisque,** Head, Information Systems; **Jeremy Prevost,** Web Applications/Software Developer; **James Shedlock, AHIP, FMLA,** Director; Galter Health Sciences Library, Northwestern University, Chicago, IL

Objectives: The library's website has always maintained its own brand vision, separate from the medical school and university websites' graphic identities. This included its own color scheme, typographical elements, and logo. Recent institution brand guidelines required us to redesign our website to bring it in line with the look and feel of the medical school vision for all affiliated websites.

Methods: The medical school and university are administratively separate and have differing website guidelines, so we needed to tread carefully to create a coherent brand that would fulfill competing requirements for header and footer design, color palate, and typography. Because the library' website is the portal for searching all our resources as well as an information site, we worked with the medical school's office of communications to create a template that would take the library website' unique needs into account (e.g., changing the medical school search box to search library resources). We also incorporated elements of the university's design into the new library interface so that it was in line with shared university systems that were based on the university guidelines. Over several months, we used an iterative process to refine the design to create a cohesive, easy-to-use interface.

Results: The new design is similar enough to the medical school and university websites to be clearly associated with the overall brand, yet different enough to allow the library website's primary

purpose as a tool for resource discovery to shine through. While there was a slight learning curve for our users owing to the repositioning of some commonly used links on our home page, the new graphic identity has been received well by our user population, including the medical school' office of communications.
Conclusions: Opening the lines of communication early with all stakeholders—the medical school's office of communications, library staff, and users—ensured that the vision for the new design was clear from the beginning and there were no last minute surprises.

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Partnerships in Diversity: A Multi-Pronged Collaboration with the School of Public Health
Judith Smith, Liaison Librarian, Taubman Health Sciences Library; **Gurpreet Rana,** Global Health Coordinator, Taubman Health Sciences Library; **Chanel F. DeGuzman,** Director, Academic Diversity Initiatives, School of Public Health; University of Michigan–Ann Arbor
Objectives: To develop and sustain a partnership in support of a school of public health's (SPH) diversity strategic plan.
Methods: A core strategic mission at the SPH is building a greater focus on diversity initiatives. Members of the health sciences library's public health Informationist team saw an opportunity to collaborate and share information skills-based expertise to support the SPH diversity mission. Public health informationists reached out to SPH's academic diversity initiatives director and subsequently began planning a range of information services with SPH. Proposed services included expert searching on diversity and innovation in public health, development of online resources to integrate diversity-related content into the curriculum, and initiatives to help SPH recruit a diverse student body. This poster will outline the variety of information projects and discuss future plans.

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Planning a Strategic Lineup for the Delivery of Effective Reference Services
Erin Kerby, Student, School of Information; **Nadia Lalla,** Coordinator, Collections and Information Services, Taubman Health Sciences Library; **Deborah Lauseng,** Coordinator, Liaison Services, Taubman Health Sciences Library; University of Michigan–Ann Arbor
Objectives: The purpose of the study was to determine trends in the provision of all forms of reference services at an academic health sciences library by librarians and other staff over the period of one year.
Methods: This library serves professional schools of medicine, public health, nursing, dentistry, and pharmacy and a major regional health system; it is also open to the public. Data were collected from the library's service management and statistical management software packages and used to conduct a trend analysis. Research questions addressed potential correlations in the data including service points, length of reference transactions, peak service times, and staffing. The data initially were grouped into subsets according to the different service points. Within each subset, the frequency and percentage were calculated for the predefined categories of question length, (reference) contact type, and purpose of contact or visit. Finally, each subset was analyzed to determine trends specific to that particular service point, such as frequency over certain periods of time.

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Providing Biomedical Reference on Community Research Networks: A ResearchGate Pilot Study
Rolando Garcia-Milian, Basic Biomedical Sciences Librarian/Liaison, Biomedical and Health Information Services, Health Science Center Libraries; **Hannah F. Norton, AHIP,** Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; University of Florida–Gainesville
Objectives: There is growing awareness and use of professional networking platforms for scientific research and collaboration (e.g., VIVO, NetSci, Innocentive, Harvard Catalyst Profiles). With over a million users, ResearchGate (www.researchgate.net) has attracted the attention of biomedical researchers (medicine and biology are largest disciplines represented) including 250 from our institution. This work explores the provision of biomedical reference services over this network.
Methods: To investigate potential roles for biomedical librarians in this network, a biomedical librarian provided online reference services through several ResearchGate interest groups and used participant observation to characterize his activity and researchers' responses. In addition, participants in some of those interest groups were asked to evaluate library-generated subject guides related to their field. Network members' responses to subject-specific questions also allowed the librarian to evaluate the overall knowledge of the network. Statistical methods were used to analyze the activity of the different interest groups in terms of network size and question/reply frequency, among others. Finally, the biomedical librarian's own network was studied in terms of size, growth rate, followers' disciplines, and geographic location of followers.
Results: After providing reference for more than 8 months, the biomedical librarian's network grew to 180 followers. After following 16 interest groups for 4 months, 2.12 questions per week on average were answered. These questions required the use of numerous subject-specific databases and tools such as Online Mendelian Inheritance in Man, Gene Expression Omnibus, PubChem Compound, Natural Standard, American Type Culture Collection, and TOXNET, among others. In addition, the previous experience of the biomedical librarian in the laboratory was valuable when responding to those questions posed in the methods group and related to research procedures and protocols. Other general topics such as avoiding plagiarism, reference management software, and peer reviewing process, among others, were also discussed by researchers. Specific interest groups not only provided invaluable feedback in evaluating three library-created guides—Bioinformatics, Genetics, and Genomic—but also in the process of creating a new library guide on Proteomics resources and tools. The knowledge of these interest groups was also used to provide guidance when finding answers to complex questions from library patrons.
Conclusions: Community research networks are a useful tool in understanding researchers' information needs and information-seeking behavior. Our results could be relevant to reference

librarians and others interested in finding new ways of providing services to our users.

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Quick Response (QR) Codes: Educating Users on the History of Medicine

Dean Hendrix, Assistant Director, University Libraries, University Libraries; **Linda Lohr,** Manager, History of Medicine Collection, Health Sciences Library; **Pamela Rose,** Web, Promotion, and Outreach Coordinator, Health Sciences Library; **Keith Mages,** Assistant, History of Medicine Collection, Health Sciences Library; **Caitlin Kenney,** Student Assistant, Health Sciences Library; University at Buffalo, Buffalo, NY

Objectives: The health sciences library routinely displays items from its history of health sciences collection in its public spaces. Users often inquire about the objects, their uses, provenance, and other historical information. The objective of this pilot study was to evaluate the use of quick response (QR) codes in providing information about, and promoting a historical medical instruments collection.

Methods: For six medical instruments, the authors created promotional posters with corresponding QR codes. The QR codes linked to the library's digital collections, which allowed users access to additional information about the particular instrument. Using Google Analytics, a commercial web analytics software package, the authors tracked several aspects of QR code use, including total views, popular instruments, devices used to access information, and temporal and comparative analytics.

Results: Despite the strategic placement of posters throughout the library, use of the QR codes was extremely low. In the first month, there were only seven accesses to our digital collections via QR codes, five through iPhones and two through iPods. During the same month in 2011, there were no accesses to the specific images via mobile devices.

Conclusions: External drivers such as ubiquity of QR codes and increasing smartphone adoption ostensibly portended success for this pilot. However, we determined that adopting QR codes as an information resource or the focus of a promotional campaign would not be a prudent application of valuable staff time and effort at this time.

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Reinventing the Librarian as a Core Educator on a New Medical School Campus

Julie K. Gaines, Head, Medical Partnership Library, GHSU/University of Georgia Medical Partnership Campus Library, Georgia Health Sciences University–Athens

Objectives: Medical schools are increasingly incorporating active learning methods in their curricula, based on recommendations from the Liaison Committee on Medical Education (LCME). Active learning strategies create opportunities for librarians to become fully integrated in the medical school curriculum. This presentation will describe how a new medical school fully integrates a librarian as a core educator and curriculum team member.

Methods: As faculty at a new four-year medical school campus that opened in August 2010, the librarian is active in an environment that fosters new opportunities for her skills to be integrated in the curriculum. She contributes to the curriculum as a core educator in six main ways: (1) teaching search skills and data reduction principles with evidence-based medicine (EBM) topics, (2) serving as an active member of the curriculum committee to help create sessions aligned with each EBM topic covered in the first year, (3) grading students' search and informatics skills, (4) writing United States Medical Licensing Examination (USMLE)-style test questions, (5) serving as a small group facilitator in the community health component where she guides students in their community project, and (6) collaborating with the associate dean of curriculum to plan involvement in the next three years of the medical students' experience.

Results: Several data sources were used to inform the librarian's impact on the medical school: a survey, student performance on exam questions, observations of teaching, and evaluations of classes. The response rate on the survey was 74% (29/39) of second-year medical students. Students report using their information seeking skills in a variety of settings: small groups, large groups, and the clinical setting. Exam results indicate that the students are knowledgeable about information seeking and can apply their skills when needed. Further, the data indicate that the librarian is perceived as an effective teacher and facilitator as indicated by her session evaluations and observations.

Conclusion: These data indicate that the librarian is perceived as helpful in finding information, knowledgeable about the library resources, and effective as a teacher. Further, the data indicate that the information skills being taught are useful for student performance. In sum, this experience shows that librarians can be fully integrated in the medical school curriculum.

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Rethinking the Medical Library Website: How Using a Content Management System Changed Our Web Game

Ann Gleason, Head, Systems; **Leilani A. St. Anna, AHIP,** Information Management Librarian; **Amy L. Harper,** Clinical Librarian; **Terry A. Jankowski, AHIP,** Head, Information and Education Services; **Sarah Safranek,** Information Management Librarian; Health Sciences Library, University of Washington–Seattle

Objectives: The library website serves the information needs of the University of Washington academic health sciences community and receives over four million page views annually. After years without upgrading, the aging website infrastructure made a redesign necessary. Other redesign goals included cleanup and prioritization of site content and library services, standardization of page templates, maintenance simplification, and more.

Methods: The game changer for us was using Plone, an open source content management system (CMS) to achieve our goals. We also use LibGuides for more dynamic content such as tutorials and course guides. As we moved from design to implementation, we were surprised by how some of our priorities changed due to the use of a CMS. This poster describes how our focus shifted from organization and tool creation toward the more important considerations of content and user needs. We are conducting usability studies and collecting comments from users and staff to evaluate the success of our new website.

Results: Web statistics suggest that some of our redesign goals, for instance, making information quickly accessible, have been reached. Initial reaction to the new website, though primarily positive, resulted in several changes to the interface to improve subject access to e-books and e-journals. Additional feedback suggests the new site may be text heavy.

Conclusions: Using a CMS made organization of resources and services easier. Staff time for editing content has dramatically decreased with the new CMS. Challenges encountered included creation of subjects for organization of e-books and e-journals, integration of LibGuides with the Plone website, and issues with linking to multiple vendor platforms. Usability studies will be conducted monthly to make incremental changes and to determine future directions.

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Revitalizing Education at the Library: Increasing Number of Attendees and Responding to Feedback

Emily Vardell, Director, Reference and Education; **Vedana Vaidhyanathan,** Biomedical Research Librarian; Louis Calder Memorial Library, Miller School of Medicine, University of Miami, Miami, FL

Objectives: The librarians sought to increase the number of patrons who enroll in the database classes offered, as well as better evaluate educational offerings.

Methods: The librarians identified a decline in both the number of classes and attendees. To increase the quality of training and quantity of patrons, we undertook a new marketing effort. We sought marketing avenues including advertising classes in the campus-wide newsletter, on a white board in the library, and on an electronic board at the library's entrance. We instituted a policy of following up via email with patrons who enroll but do not show up for the class to encourage enrollment in future classes. Now librarians allow time for walk-ins who observe the signs and want to take the class without registering. The librarian takes down the names and email addresses of drop-ins for follow-up. We created an electronic student feedback form. This survey is used to evaluate teaching styles, address follow-up questions, and determine how patrons learned about the classes.

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Revitalizing Library Programs and Services through Yogisms

Kenneth E. Nero Jr., Nursing Liaison Librarian, Louis Stokes Health Sciences Library, Howard University, Washington, DC

Objective: In the life of a health sciences librarian, sometimes it just feels like deja vu all over again. This and other wise insights (also known as Yogisms) from Major League Baseball Hall of Famer Yogi Berra will be showcased on a poster that looks at the revitalization of the moribund services and programs offered at a mid-sized health sciences library.

Methods: A mid-sized, academic health sciences library found itself in a decade-long slump. Having to endure several structural changes such as three library directors, several adjunct deans of the medical school, and five senior vice presidents for health sciences, the library was certainly ripe for substantive change. The library hired a new executive director, director of operations, a senior librarian, and three liaison librarians. In regard to the liaison librarians, one of the end goals is to institute an embedded librarian program to further improve the services offered. Coupled with both a complete audit of the reference and reserve collections and increasing the amount of workshops provided, the library also began using technology to promote its services and programs by creating several LibGuides to better serve its customers.

Results: Professors and students expressed a higher level of satisfaction with the library and its services than they did eighteen months ago. Reasons for patron's confidence boost varied from the collection and new staff to the LibGuides and workshops. All of the professors and students view the library today more positively than they did eighteen months ago.

Conclusions: Providing a wider array of services and improving upon those already offered can increase both customer satisfaction with and confidence in the library.

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School of Nursing and Department of Nutrition, Food Science, and Packaging at San Jose State University: Bibliometric Study 2006–2011

Valeria E. Molteni, Academic Liaison Librarian; **Emily K. Chan,** Academic Liaison Librarian; Martin Luther King Jr. Library, San Jose State University, San Jose, CA

Objectives: (1) Identify current knowledge areas of research in the School of Nursing and the Nutrition, Food Science, and Packaging Department at San José State University, limited to the last five years. (2) Identify the preferred sources where the researchers publish from these two programs. (3) Observe the relationship between scientific research production and budget in two specific health sciences-related programs

Methods: This research will be a descriptive, observational study quantifying the scientific production of the School of Nursing and Nutrition, Food Science, and Packaging Department at San José State University, San José, CA. This study will use the following data sources: SCOPUS, Web of Science, Journal Citation Reports, and San José State University statistics. This study will investigate diverse variables including: production per year, impact factors of the journals used by the researchers, knowledge areas covered, and the number of citations received, within the landscape of a fluctuating budget. This study will provide data on research production in two specific health sciences programs in an urban university during the period of 2006–2011. This information will be used to tailor and improve future library services and obtain a fuller understanding of the scholarly behavior of this library's subpopulation.

Results: Faculty lists, obtained from San José State University course catalogs, indicate that the Nursing Department's tenure-track/tenured faculty group decreased from 2006 to 2011. The Nutrition Department's faculty numbers remained fairly consistent during the same time period. From 2006 to 2011, the Nursing Department faculty published 49 peer-reviewed articles, with 106 and 226 article citations from Web of Science and SCOPUS, respectively. Twenty-nine nursing articles were found through Web of Science, while 41 articles were found through SCOPUS. The Nutrition Department faculty generated 15 peer-reviewed articles, with 42 and 66 article citations from Web of Science and SCOPUS, respectively. All 15 of the Nutrition Department's article citations were found in SCOPUS, while Web of Science retrieved 10 articles. Of the journals with impact factors, the Nursing Department's values for journal impact were 0.977 (mean), 2.036 (high), and 0.486 (low). The Nutrition Department's journal impact factors were 1.370 (mean), 2.519 (high), and 0.617 (low). Only journals with impact factors were included in the statistics. Journals without impact factors were omitted and did not influence the department's respective values. The Nursing Department had a total of 63 knowledge areas, while the Nutrition Department had 12.

Conclusions: Faculty production is a function of a myriad of factors. During lean budget times, attrition and increased teaching loads may unduly affect scholarly output. Despite these stressors, both the Nursing and Nutrition Departments at San José State University have generally maintained or increased scholarly output, quantified by number of published articles and article citations. Interestingly enough, coverage and discovery of San José State University Nursing and Nutrition faculty output was greater with the citation database SCOPUS. San José State University's King Library does not subscribe to this database. Future areas of research could investigate the root causes of this observation to inform collection development decisions.

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Sharehousing: Adopting the Household Model in the Establishment and Integration of a New Virtual Medical Library

Stephanie M. Swanberg, Assistant Professor and Medical Librarian, William Beaumont School of Medicine Library; **Shawn V. Lombardo,** Associate Professor, Collection Development Coordinator, Kresge Library; **Nancy Bulgarelli,** Director, William Beaumont School of Medicine Library; **Misa Mi, AHIP,** Associate Professor and Medical Librarian, William Beaumont School of Medicine Library; Oakland University, Rochester, MI

Objectives: A newly founded school of medicine recently welcomed its charter class and, as required by the Liaison Committee on Medical Education (LCME), developed a new medical library in collaboration with the university's greater campus library. This poster reflects on the planning, development, and launch of the born-digital medical library and its primarily virtual collection.

Methods: The founding of the medical library proved a rigorous process and required the cooperation of the school of medicine, affiliated hospital system, and the university library for ultimate success. A timeline will highlight the major milestones in the project, including building the budget, identifying key resources for a base electronic collection, negotiating license agreements and user status between the school of medicine and affiliated hospital system, hiring a library director, expanding the collection in conjunction with the arrival of new faculty and fine-tuning of the curriculum, and determining the medical library's place within the existing university library.

Results: The campus and medical libraries have adopted a unique sharehousing model not only for resources in the collection, but also library services in the integration of the school of medicine into the greater university campus. The two libraries share the same physical space; collaborate on purchases and license agreements; integrate their print collections; coordinate document delivery services; and experiment with new initiatives, such as 24-hour access.

Conclusion: This partnership has resulted in the creation of a united university libraries. However, this new library system is still in its infancy; in moving forward, the new libraries will evolve the sharehousing model in the collaborative acquisition of new resources and services to support not only the university, but also the surrounding community.

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Social Workers and Consumer Health Information: Waiting in the Bullpen

Stephen H. Kiyoi, National Library of Medicine Associate Fellow, National Library of Medicine, National Network of Libraries of Medicine, Pacific Southwest Region, Louise M. Darling Biomedical Library, University of California–Los Angeles; **Laura Bartlett,** Technical Information Specialist, Specialized Information Services, National Library of Medicine, National Institutes of Health, Bethesda, MD

Objectives: Social workers often serve clients with low information literacy, with high incidence of chronic health conditions. As of 2005, social workers report that 36% of their clients have at least 1 chronic health condition. This project was undertaken to build awareness of and support for increased health information outreach from medical librarianship to the field of social work.

Methods: Of approximately 642,000 social workers in the United States, 43% work in health and mental health fields, a subset expected to grow by approximately 21% between 2008 and 2018. However, medical librarians have not often trained social workers in how to conduct effective biomedical research and how to share relevant consumer health information with their clients. Team members conducted a literature review in both medical and social work databases, interviewed 13 librarians at master's in social work (MSW) programs, and will administer a national survey to determine medical librarian's receptiveness and ability to conduct health information outreach in the social work community.

Results: A literature review revealed few examples of health information outreach to and no systematic needs assessment of the social work community. Two articles in particular point to a potential need for health information in the social work community: the first found that 36% of social work clients have at least 1 chronic health condition; the second found that 16% of citations in social work journals come from medical journals. The survey to the Regional Medical Libraries (RMLs) (100% response rate) revealed that they do not specifically target social workers as a population for health information outreach, and member libraries interactions with social workers are not specifically tracked. However, 7 of 8 RMLs indicated interest in participating in future stages of research. The pilot survey to the National Network of Libraries of Medicine (NN/LM) member libraries provided positive feedback on our survey instrument and indicated that many member libraries may be interested in pursuing increased research and outreach to the social work community.

Conclusion: The social work field is a dynamic public health profession in need of targeted health information outreach. Moving forward, there is a need for: administration and analysis of the survey to the NN/LM member libraries, focus groups to follow up on survey results, and an information needs assessment of social workers and social work students. Each piece will contribute to the project team's decisions regarding the applicability, feasibility, and nature of further health information outreach to the social work community.

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Study Results in ClinicalTrials.gov: A Whole New Ball Game

E. Diane Johnson, AHIP, Assistant Director, Information Services and Resources, J. Otto Lottes Health Sciences Library, University of Missouri–Columbia

Objectives: Since the Food and Drug Administration (FDA) began requiring the reporting of trial results, the number of records in ClinicalTrials.gov containing study results has grown rapidly. This poster will present a content analysis of all of the records in ClinicalTrials.gov containing trial results. Knowing the scope and types of trial results included in ClinicalTrials.gov will help librarians search the database more effectively.

Methods: All of the records containing study results were downloaded from ClinicalTrials.gov and analyzed by type of intervention, funding source, and date. Trend analysis will be conducted to examine the proportion of studies containing results compared to all studies over time. The relationship between the publications field and the "has results" tag will be explored. The structure of the records will be examined to see how the database can be interrogated using patient/problem, intervention, comparison, outcome (PICO) queries.
Results: Of the 79,921 closed clinical trials in ClinicalTrials.gov, 75% include neither trial results nor links to publications; 19% include publication links but no results; 5% include results and publication links; and 1% include results but no publication links. Nearly all trial results are for studies completed since 2009.
Conclusions: While only 6% of the trials include results, expanding the search to include either results or publication links will typically retrieve many more records, since about 25% of all records have publication links, results, or both. The search strategy to retrieve trials with either results or publications is: [FIRST-RECEIVED-RESULTS-DATE] OR (NOT NOTEXT) [CITATIONS].

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Team Spirit: How Three Libraries Are Working to Support Health Sciences Libraries in Liberia

Anne Linton, AHIP, Director, Himmelfarb Health Sciences Library, School of Medicine and Health Sciences, George Washington University, Washington, DC; **Elaine Martin,** Director, Lamar Soutter Library, Medical School, University of Massachusetts–Shrewsbury; **Cynthia Henderson, AHIP,** Executive Director, Louis Stokes Health Sciences Library, Howard University, Washington, DC; **James Comes,** Consultant, Worcester, MA; **Alexandra Gomes, AHIP,** Associate Director, Education, Information and Technology Services, Himmelfarb Health Sciences Library, George Washington University, Washington, DC; **Darcel Bryant, AHIP,** Senior Health Sciences Librarian, Louis Stokes Health Sciences Library, Howard University, Washington, DC
Objectives: International medicine initiatives often occur through institution specific efforts. Yet information needs extend across borders and institutions. Three American health sciences libraries have united to support the development of health sciences libraries in Liberia. While separate schools will support undergraduate and graduate medical education initiatives, the libraries are working together to bring current information resources to all health care professionals.
Methods: Three health sciences libraries have united to improve library collections in Liberia and create a consortium of information providers. Work to date has focused on the reestablishment of library services at the Dogliotti School of Medicine, University of Liberia, and the transfer of the collection of the recently closed Walter Reed Army Medical Library overseas under the purview of the Medical Initiative for a Liberian Library (MILL) Project. The library's collection will be used to establish the Walter Reed Medical Collection at the medical school and a clinical collection at the John F. Kennedy Medical Hospital in Monrovia. Partners include the Maryland Liberia Sister States Program, the Partnership for Advanced Technology Training, the University of Indiana Office of International Affairs, UMASS Medical School, Howard University Louis Stokes Health Sciences Library, and the George Washington University's Himmelfarb Health Sciences Library.
Results: To date, over 10,000 books donated by health sciences personnel and the Walter Reed Army Medical Library have been packed and readied for shipping to a secure staging area in Monrovia, Liberia. Librarians from the Lamar Soutter Library of the UMASS Medical School have made three trips to Liberia to assess library services at the Dogliotti School of Medicine, University of Liberia, and to conduct staff training sessions. Future assessments and trips are planned by additional team members to document clinical information needs and conduct additional training in evidence-based medicine searching during summer 2012.
Conclusions: There is a real and pressing need for current educational and clinical materials in the Liberian health care community. Students are eager to further their studies using the best, current resources. Clinicians are eager to use the strongest medical information resources to make patient care decisions. The MILL project and the collaborative efforts of the Lamar Soutter Library of the UMASS Medical School, Howard University Louis Stokes Health Sciences Library, and the George Washington University's Himmelfarb Health Sciences Library represent a substantial and cooperative effort to meet these needs.

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The Boldt Articles: A Bibliometric Study on the Effect of Retractions on Scholarly Publication

Jennifer L. Boxen, AHIP, Education and Liaison Librarian, Health Sciences Library, Hofstra North Shore/LIJ School of Medicine, Staten Island, NY
Objectives: To conduct a bibliometric analysis of all the available scholarly publications citing the retracted articles (n=88) originally published by Joachim Boldt et al. between 1999 and 2009 that were subsequently retracted March 2, 2011 (updated March 12, 2011), for procedural misconduct.
Methods: Articles will be located via a prospective cited reference search in the Web of Science, Scopus, and Google Scholar databases. Resulting English language articles from Web of Science and Scopus were categorized by specific evidence level. Systematic reviews and meta-analysis were further examined to ascertain whether the numerical data from the retracted articles were included as part of the authors' statistical analysis and/or results. Secondary findings will consist of whether those publishers and authors that included data from retracted articles have themselves given any type of reader notification of the Boldt retractions and the implications.

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The Effect of Required iPads on Library Use

Gary E. Kaplan, Senior Librarian, Information Services; **Dorothy Berenbrok,** Collection Organization Librarian; **Dan G. Kipnis,** Senior Education Services Librarian and Manager, Jefferson Digital Commons; **Helena Washington,** Information Services Librarian; Scott Memorial Library, Thomas Jefferson University, Philadelphia, PA
Objectives: To measure the impact on library use of a new requirement by an accelerated, one-year nursing program that all students have iPads loaded with the required texts to determine whether the library should continue offering these books in print.
Methods: Identify textbooks assigned to students in the program in 2009, 2010, and 2011 and generate usage reports generated from the integrated library system.

Results: From 2009–2011, the program required 5 textbooks that were available in print editions at the library and iPad editions beginning in 2011. Two titles showed significant circulation, *Physical Examination & Health Assessment* by Jarvis (29 in 2009, 16 in 2010, 115 in 2011) and *Medical-Surgical Nursing* by Lewis (98, 135, 127).
Conclusions: Neither of the books showed a large decrease in 2011, when the students all got access to the iPad versions, and one showed a marked increase. We recommend that these titles continue to be offered in print editions and their use monitored.

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The Home Team Advantage: Collaborating with Community Partners and Developing Local Digital Materials to Host a National Library of Medicine Traveling Exhibit
April J. Schweikhard, Medical Librarian, Schusterman Library, University of Oklahoma–Tulsa
Objectives: To demonstrate how an academic health sciences library can collaborate with a community partner to develop local materials augmenting a National Library of Medicine traveling exhibit. Digital and multimedia materials highlighting local history were created and displayed with the exhibit in order to engage the library's university campus and medical community.
Methods: The University of Oklahoma-Tulsa Schusterman Library partnered with the Tulsa County Medical Society to host "Opening Doors: Contemporary African American Academic Surgeons," a traveling exhibit developed by the National Library of Medicine. The exhibit was hosted for a seven-week period in the library's digital information gallery. Digital materials emphasizing the experience of local African American physicians were created and displayed in the gallery with the traveling exhibit. Materials included biographies of physicians, a timeline of medical facilities, and an oral history of a deceased African American surgeon. The library formed a partnership with the medical society to assist in contacting local African American physicians and organizing an opening reception for the exhibit. This poster describes the process required to identify and create local materials for a digital exhibit and the development and benefit of a collaborative relationship with a community organization.
Results: To launch the exhibit, the Schusterman Library hosted an opening reception in conjunction with the Tulsa County Medical Society. A catered dinner was sponsored by the medical society. Three guest speakers presented on the topic of African American health care experiences and challenges within the Tulsa community. Two of these speakers were identified through the assistance of the medical society. Fifty-four people attended the event. Attendees included members of the Tulsa County Medical Society, the University of Oklahoma-Tulsa, and the broader Tulsa community. Prior to and following the event, attendees were able to view the exhibit display.
Conclusions: Partnering with the Tulsa County Medical Society to host the National Library of Medicine traveling exhibit greatly enhanced the scope of this project. As a result of this collaboration, the Schusterman Library was able to promote the project to a wider audience, to introduce members of the medical society to the new library, and to obtain assistance in identifying sources for the creation of local content to supplement the exhibit.

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The United States Breast Cancer Research Stamp
Robert Cagna, AHIP, Library Director, Health Science Library, Charleston Division, West Virginia University Health Sciences Center–Charleston
Objectives: This will be a historical analysis of the US Breast Cancer Research Stamp, which was issued by the US Postal Service. How has the stamp increased public awareness of breast cancer, and how has it helped raise funds to find a cure?
Methods: This historical analysis will examine the causes and effects of the forces that opposed the stamp and the forces that championed it.

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Using a Plan-Do-Study-Act (PDSA) Cycle as a Framework for Curriculum Improvement
Nancy Bulgarelli, Director; **Stephanie M. Swanberg,** Assistant Professor and Medical Librarian; **Misa Mi, AHIP,** Associate Professor and Medical Librarian; William Beaumont School of Medicine Library, Oakland University, Rochester, MI
Objectives: An exciting aspect of developing the library to support a new medical school was the opportunity to create a formal "Information Mastery" curriculum as part of a four-year capstone project. This poster illustrates how the plan-do-study-act (PDSA) cycle was used to structure a process of continuous improvement as instruction was delivered over the course of the first (M1) year of medical school.
Methods: The M1 year includes a required capstone course that covers topics foundational in preparing students to complete a four-year scholarly project. The "Information Mastery" curriculum includes five sessions (eight hours) of library instruction, at the end of which students will have prepared a comprehensive literature review and bibliography to support their project proposals. Because capstone is a high-stakes, graded course, we felt it important not only to ground instruction on sound pedagogical theory, but to also incorporate a method of continuous improvement in order to build a mechanism for rapid-cycle review and change. We settled on the PDSA cycle developed by Shewhart and popularized by Deming to provide the needed structure. PDSA has been used extensively across all types of industries since the 1950s and has recently found its way into education.

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Changing the Conference Game for Students: Developing the Mid-Atlantic Chapter Student Vision Program
Ryan Harris, AHIP, Reference and Research Services Librarian, Health Sciences and Human Services Library, University of Maryland–Baltimore; **Shannon D. Jones, AHIP,** Associate Director, Research and Education Services, Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University–Richmond; **Bart Ragon,** Associate Director, Knowledge Integration, Research, and Technology, Claude Moore Health Sciences Library, University of Virginia Health System–Charlottesville
Objectives: The Membership and Recruitment Committee of the Mid-Atlantic Chapter (MAC) of the Medical Library Association wanted to improve master's of library science (MLS) student participation at the chapter's annual meeting. The committee also

wanted to meet one of its objectives to help increase awareness of medical librarianship.
Methods: The Student Vision Scholarship and Program was established by the MAC Membership and Recruitment Committee for the 2010 MAC meeting in Chapel Hill, NC. The scholarship included complimentary registration for the meeting. Programming included matching students with an experienced mentor and a speed resume clinic/mentoring session with nine library directors. Students were also encouraged to submit poster or paper abstracts to be presented at the meeting. The program was advertised to local library school students in North Carolina, as well as throughout the MAC region. A subcommittee comprising Membership and Recruitment Committee members was formed to evaluate student applications for the scholarship.

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Want to Learn more about Herbs? Is Joining a Social Networking Group the Answer? An Exploratory Investigation of Herbal Information Sharing on Facebook and LinkedIn

Julia Whelan, AHIP, Reference and Education Librarian, Countway Library of Medicine, Medical School, Harvard University, Boston, MA; **Kelly Dagan,** Librarian/Information Specialist, University Research Associates, Chicago, IL; **Morgan Anderson,** Student, College of Pharmacy; **Erin Lisa Pepin,** Student, College of Pharmacy; **JooHyun Song,** Student, College of Pharmacy; **Douaa Sindi,** Student, College of Pharmacy; **Lana Dvorkin-Camiel,** Director, Applied Natural Products Programs; **Samah Alshehri,** Student, College of Pharmacy; **Matthew Coorie,** Student, College of Pharmacy; Massachusetts College of Pharmacy and Health Sciences–Boston

Objectives: Facebook and LinkedIn each have 100 million plus users. Groups on both include businesses, associations, schools, etc. Uses include information seeking, marketing, education, professional connections, and networking. The quality and content of this health information is poorly understood. We investigated the presence of the natural products community of interest in the largest social networks and their information sharing activities.
Methods: We set out to conduct an analysis of the types of information being shared and the reasons (i.e., marketing, referrals, education, etc.) natural product groups are using this networking media. We searched Facebook and LinkedIn to identify group activity on this topic. We created a new identity and performed an advanced search on Google to avoid the automatic filtering of content by user preferences. We identified thirty of the largest groups for detailed study. We created an instrument to objectively evaluate the activity of each group. Metrics included frequency of posts and comments, number of participants, types of information exchanged, and a sampling of topics discussed.
Results: The majority of the groups contained 101–500 members: 45% Facebook, 30% LinkedIn; 5% had more than 3000 members each. Facebook participants asked more questions and posted more comments and likes and more pictures. More posts on Facebook were educational, written by experts, provided group support and professional development. More posts on LinkedIn provided business networking and links to references and were led by participants. More LinkedIn groups discussed sales or contained advertisements (60% vs. 36%). The main topics in both networks were therapeutic use, medicine making, education, nutrition, other natural treatments, science, horticulture, and reputable companies.
Conclusion: Vibrant discussions occur on both networks. A large population has embraced this media for networking, information, and education.

Poster Session 2

Monday, May 21, 3:30 p.m.–4:30 p.m.

WSCC, 4A/B, Level Four

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Instruction by Design: We Build It and They Learn

Gonghua Liu, Instructional Design Librarian; **Kimberly R. Powell,** Life Sciences Informationist; **Mia S. White, AHIP,** Reference Librarian; **Anna Getselman,** Associate Director; Woodruff Health Sciences Center Library, Emory University, Atlanta, GA

Objectives: This poster describes an innovative approach to building an e-learning model. The process of developing an independent learning curriculum demonstrates the significance of librarians as content developers and their needs for instructional design expertise.

Methods: The educational model shift from lecture to interactive, problem-solving activities prompted the development of a stand-alone "eLearning Solutions" curriculum for ubiquitous, self-learning opportunities. Content selection is based on audience needs, preferences, and skills. Subject experts, with an instructional designer, identify goals and objectives critical for effective content delivery. The copyeditor finalizes formatting, style, and accuracy of the text. Visual and technical design takes into consideration the nature of the content, audience, and instructional goals and objectives. The development phase provides opportunities for resolving problems in content and design and for making changes.

5

It's a Whole New Ballgame: From Medical Subject Headings to the Cloud

Priscilla Stephenson, Chief, Library Service/Medical Media, Philadelphia VA Medical Center, Philadelphia, PA; **Mary Virginia Taylor,** Chief Librarian, Medical Library, Education and Training Service, Overton Brooks VA Medical Center, Shreveport, LA

Objectives: This poster will review the changes in libraries and librarianship in the last fifty years. Since the advent of Medical Subject Headings (MeSH) in 1960 and MEDLARS in 1964, the world of health sciences librarianship has evolved to a whole new ballgame, due in large part to changes in technology.

Methods: We will round the bases, looking at the major changes in health sciences librarianship from 1960 to 2012 and beyond, looking to our future in the cloud! From MEDLARS to PubMed, from print journals to e-pubs, from American Library Association interlibrary loan forms to DOCLINE, from manuscripts to e-books, from glass slides to streaming video, our work has been transformed. This will be a visual timeline illustrating the dramatic changes in our work and practices as health sciences librarians.

8

New Opportunities: Medical Education History in a Digital World

Marian G. Taliaferro, AHIP, Director, Reference Center and Archives; **Molly Alexander,** Archivist; Association of American Medical Colleges, Washington, DC

Objectives: To share experiences and best practices in bringing a medical education archives from the paper era to the digital one. This poster proposes to detail all aspects of the process, from grant application, to selection of materials to be digitized, to work with vendors, to online production and publicity of the new resource.

Methods: In order to provide better access to the history of the development of medical education in the United States and Canada as well as to preserve the actual, fragile physical documents, library and archives staff sought and obtained funding and technical solutions for creating an online digital repository. After identifying potential sources for funding digital projects, staff obtained a grant, researched best practices in digitization, interviewed vendors, selected specific content, led web design staff on ideas and organization for a new website, and created descriptive metadata before publicizing the project to interested groups at large. Post-launch, staff has tracked data on usage of the new online resources and fielded feedback in order to prepare for future, similar digitization efforts.

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A Project to Improve the Effectiveness of Teaching and Assessing Nurses' Skills in Retrieving Literature

Lin Wen Chuan, Librarian, Department of Research Education and Training, Kaohsiung Municipal Hsiaokang Hospital, Hsiaokang, Taiwan

Objectives: The medical library is positioned to play a key role in hospitals. The increasing use of nursing resources for nurses to practice clinical questions. Nursing literature with accurate medical information at the point of care. Literature searching, a newly emerged concept in recent years attracted the attention of nurses. This poster describes the effectiveness of taking workshops through instructional classes.

Methods: The study was designed to be an interventional study. We have developed a workshop that began with one and half hours in May to June 2011. The workshop content focused on the nursing-related resources literature retrieval. The study subjects were selected from an academic hospital in the south of Taiwan, consisting of nurses who came from different four units, namely the hemodialysis room and 7B ward, of the hospital. The study instrument is a multiple-choice test, including Medical Subject Headings (MeSH), Boolean logic, CINAHL, bibliographic material, and copyright law, totaling 8 items. We exercised the pretest and the posttest as outcome measures through instructional class to compare the effectiveness of learning and performed descriptive statistics nonparametric Wilcoxon test for data analysis. Statistical data were analyzed using SPSS, version 14.

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A Study of the Impact of Research Publications Funded by a Clinical and Translational Science Award

Jonquil D. Feldman, AHIP, Director, Library Services and Outreach Services, Briscoe Library, University of Texas Health Science Center–San Antonio

Objectives: As our institution prepares to renew the application for a Clinical and Translational Science Award (CTSA), the aim of this study is to determine whether the research funded through this award has had an impact, as demonstrated by journal citation analysis.

Methods: We created a simple search strategy in PubMed to generate a monthly list of publications funded by grants from the institution's CTSA. The list was originally requested by the CTSA office to ensure that investigators had submitted their manuscripts to PubMed Central, in compliance with the National Institutes of Health public access policy. Using the PubMed search results, we used Journal Citation Reports to compile data on the impact factor, the Eigen factor and article influence for each article published between 2009 and 2011. We then searched Web of Science to determine the number of times each article had been cited. The data were compiled into an Excel spreadsheet for easy sorting and analysis.

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Achieving Consistency and Quality in Patient Education with Templates for Print Materials

Ruti Volk, AHIP, Patient Education Librarian, University of Michigan Health System, University of Michigan–Ann Arbor; **Lisa Schneider,** Project Facilitator, MFit, University of Michigan Health System–Ann Arbor

Objectives: In a large health system, patient education materials are formatted differently by different units, departments, and centers. Many do not follow the recommended guidelines for effective patient education and do not use appropriate fonts, layout, and language. Frequently images are used without permission, and many handouts lack important elements such as a logo, a disclaimer, and date of publication or revision.

Methods: The librarian led a team effort to create an institution-wide tool that guides clinicians in creating effective patient-education print materials. The team developed templates based on guidelines published by national organizations such as the Centers for Disease Control and Prevention, Centers for Medicare and Medicaid Services, and others. The templates specify font face and size, line-spacing, and layout requirements. A short "Do's and Don't's" list summarizes the core principles of effective, patient-centered educational handouts such as: use of active voice instead of passive voice, use of bulleted lists instead of long narrative sentences, and use of bold type instead of all-capitals or hard-to-read font effects. The templates remind clinicians to test their handouts for readability and use images with permission. The templates also include a logo, a disclaimer, a date of publication or last revision, and space to note the names of authors and reviewers.

Results: The team created templates for short handouts, booklets, pre-procedure instructions, and post-procedure instructions. They can be downloaded from the University of Michigan's Health System's intranet. The organization's Public Relations Marketing and Communication department helps to reinforce use of the templates, because the health system's public website, (UofMhealth.org) does not link to materials that are not formatted according to the templates. Staff time to convert materials into the template is the biggest obstacle to implementation. The Patient Education Center helps clinicians to convert existing materials. Staff is also planning classes to teach clinicians the principles of creating effective patient-education print materials and how to use the templates.

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Providing Information Mastery Instruction in a Capstone Program for First-Year Medical Students: Medical Librarians' Experiences in a New Medical School

Misa Mi, AHIP, Associate Professor and Medical Librarian; **Nancy Bulgarelli,** Director; **Stephanie M. Swanberg,** Assistant Professor and Medical Librarian; William Beaumont School of Medicine Library, Oakland University, Rochester, MI

Objectives: The purpose of this poster is to demonstrate the integration of information mastery instruction into the coursework of a capstone project, a required program for medical students that extends across the four years of undergraduate medical education in a new medical school located in the Midwest region of the country.

Methods: The capstone program, as an important component of the medical curriculum in the new school, aims to help medical students build a solid foundation of knowledge and skills required for conducting scholarly work in a wide range of health-related disciplines. Medical librarians at the school successfully integrated information mastery instruction into the program by employing several strategies: practicing blended librarianship, fostering collaborations, building teamwork, focusing on learner-centeredness, and engaging in collective reflection. These strategies were formulated in light of medical student learning that is developmental, progressive, distributed, and integrative. The utilization of these strategies affected the process of the development of the capstone program as well as the end product of instruction in the form of interactive sessions delivered in a large classroom setting. The poster will delineate these strategies and describe medical librarians' experiences in applying these strategies.

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An Informatics Course Based on the Clinical and Translational Science Awards Informatics Competencies

Lee A. Vucovich, AHIP, Assistant Director, Reference Services, and Assistant Professor, Lister Hill Library of the Health Sciences; **Eta S. Berner,** Professor, Health Informatics, Department of Health Services Administration; **Chiquito J. Crasto,** Assistant Professor, Division of Research, Department of Genetics; **Elliot J. Lefkowitz,** Associate Professor, Department of Microbiology; **Susan A. Lyons,** CCTS Project Manager II, Center for Clinical and Translational Science; **Matthew C. Wyatt,** Assistant Director, Biomedical Informatics, Center for Clinical and Translational Science; University of Alabama–Birmingham

Objective: The Clinical and Translational Science Awards (CTSA) Strategic Goal 2 Committee has endorsed a set of competencies for clinical and translational researchers, including nine relating to informatics. This poster describes an educational program based on these informatics competencies. It provides researchers basic information and hands-on experiences and introduces them to the services of the biomedical informatics component of the university's Center for Clinical and Translational Science.

Methods: A one-credit hour graduate course was developed that was available as an elective for clinical and translational science master's students, but was also open to the university community. The course was implemented on a pilot basis in the summer of 2011 as a seminar series. The course consisted of seven sessions addressing the nine competencies. Each session included either an in-person or an online presentation and selected reading materials and other exercises. Students evaluated each session as well as the series as a whole. The librarian taught the session, "Access to Research Literature and Online Resources." Topics included: tools, strategies, and resources for effective literature searching

for researchers in clinical and translational science. Qualtrics surveys were emailed to attendees immediately following the seminars. Results were calculated for every session as well as an overall evaluation score.
Results: Twenty participants attended at least one session. Student evaluations to the individual sessions and the overall series were very positive. On a ten-point rating scale measuring attendee satisfaction, the sessions averaged between eight and ten. The online sessions and in-person sessions were rated similarly on the satisfaction scale.
Conclusions: Although this short course was not sufficient for mastery of the competencies, it provided an introduction targeted to the CTSA competencies and showcased resources available at the university through the Center for Clinical and Translational Science Biomedical Informatics Component. Since the student response to both the in-person and the online sessions was positive, more sessions may be able to be converted to an online format, which would lead to more flexibility for both students and faculty. The online materials could also be shared with other CTSA sites.

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Analysis of PubMed Query Logs to Guide Teaching Strategies
Aileen McCrillis, Research Librarian, NYU Health Sciences Libraries; **Karen Hanson,** Knowledge Systems Librarian, NYU Health Sciences Libraries; **Yindalon Aphinyanaphongs,** Research Assistant Professor, Department of Medicine, Division of Clinical Pharmacology, School of Medicine; New York University–New York
Objectives: PubMed is the largest and most widely used biomedical literature database in the world. The purpose of this study is to use a data-driven approach to identify and quantify common PubMed searching errors. This analysis pinpoints the need for user education and can guide the teaching strategies of health sciences librarians.
Methods: The authors analyzed 2.9 million PubMed queries spanning a 24-hour period made publicly available by the National Library of Medicine. The authors examined the queries and measured the use and misuse of PubMed syntax. PubMed syntax included search operators, field tags, and PubMed search filters.
Results: Approximately 21% or 590,000 queries contained correct usage of PubMed syntax. PubMed users who integrated PubMed syntax into their searches had, on average, fewer queries (3 queries per session) compared to users who did not (5 queries per session).
Conclusion: The advanced search functionality of PubMed is underutilized. Health sciences librarians may provide broad impact by teaching PubMed users to avoid specific common errors by emphasizing correct PubMed syntax and advanced search functionality.

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Building Partnerships: A Model for Collaborative Textbook Purchasing
C. Steven Douglas, AHIP, Head, Collection Management, Health Sciences and Human Services Library; **Yunting Fu,** Liaison and Outreach Services Librarian, Health Sciences and Human Services Library; **M.J. Tooey, AHIP, FMLA,** Associate Vice President, Academic Affairs and, Executive Director, Health Sciences and Human Services Library; **Lisa Lebovitz,** Assistant Dean, Academic Affairs, School of Pharmacy; University of Maryland–Baltimore
Objectives: This poster describes a collaboration between the University of Maryland School of Pharmacy (SOP) and the Health Sciences and Human Services Library (HS/HSL) to purchase textbooks. It was driven by the University System of Maryland Board of Regent's policy on textbook affordability measures and the new campus president's desire to promote interprofessional initiatives.
Methods: Working with the library's liaison to the SOP, the associate dean's office took the lead
• identifying two potential e-book packages
• polling faculty members on the current and potential use of the included texts in their classes.
A working committee consisting of the associate dean and assistant dean for academic affairs from the SOP and the executive director, head of collection management, and liaison to the SOP from the HS/HSL was formed. The committee decided to conduct a trial of McGraw-Hill's Access Pharmacy to see if it met the needs of the SOP's faculty and students.
Results: The trial of Access Pharmacy was greeted with much enthusiasm by SOP students and faculty, and the decision was made to move ahead with a one-year pilot in which the database will be provide to the entire campus. Toward the end of the pilot, use was reviewed and SOP students were polled.
Conclusions: Usage statistics and student feedback indicate the pilot has been a tremendous success. The library and the SOP have committed to continue their collaboration and search for additional opportunities.

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Breakdown: Evaluating the Effectiveness of the MLA Research Section Mentoring Program
Elizabeth M. LaRue, AHIP, Assistant Professor, School of Nursing, University of Pittsburgh, Pittsburgh, PA; **Heather Holmes, AHIP,** Clinical Informationist, Medical Library, Summa Health System, Akron, OH
Objectives: To evaluate the effectiveness of the MLA Research Section Mentoring Program.
Methods: Subjects: Medical librarians who presented either a research poster or paper at MLA '10 and medical librarians who had submitted their names and self-identified as mentors in the MLA volunteer database. Description/Methodology: A year-long internal review board-approved randomized controlled two-arm study was conducted. Recruitment criteria were a MLA '10 presentation and a posted self-identified desire to mentor in the MLA volunteer database. Possible participants were contacted vie email and/or telephone for the participation in the study. Details of the study were explained to each individual. If they agreed to participate their names were placed in either a mentor or mentee brown bag for random selection. Names were drawn to establish a control group of four paired individuals. The process was repeated to establish a matching intervention group.

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Capitalizing on Partnerships: Cancer Clinical Trials Education and State Cancer Coalition
Ann Duesing, Outreach Librarian, Claude Moore Health Sciences Library, University of Virginia–Wise; **Nila Saliba,** Cancer Control Coordinator/Outreach, Cancer Center, University of Virginia–Charlottesville; **Carlin Rafie,** Clinical Research Affiliation

Coordinator, Massey Cancer Center, Virginia Commonwealth University–Richmond; **Sharon Dwyer,** Co-director, Institute for Community Health, Virginia Tech University–Blacksburg
Objectives: This poster describes a cancer clinical trials education program provided by the Virginia Cancer Plan Action Coalition (CPAC) Treatment Action Team. The team chair, Ann Duesing, is the outreach librarian for far southwest Virginia, Claude Moore Health Sciences Library, University of Virginia. Duesing has worked with this coalition for several years.
Methods: This cancer clinical trials education program was provided to improve knowledge and encourage dialogue with health care providers. This is vital to increasing awareness and utilization of trials research. In March 2011, the CPAC Treatment Action Team provided a free 4-hour education program, "Clinical Trials Communication 101+." The program featured Margo Michaels, executive director of the Education Network to Advance Cancer Clinical Trials (ENACCT), teaching about dispelling myths, breaking down barriers, stimulating community engagement in research, and promoting inquiry about clinical trials. Eight videoconference sites were located throughout the state. About 125 community members and health care professionals attended. Facilitators (including the outreach librarian) were trained to lead off-line discussion groups at each site and report back to the main program.

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Changing Our Game: From the Clinical Challenge to the *Surgical Papyrus*

Deidra Woodson, Metadata and Digitization Librarian; **Dee Jones, AHIP,** Head, Cataloging; **Donna Timm, AHIP,** Head, User Education; **John Cyrus,** Liaison Librarian; Medical Library, Louisiana State University Health Sciences Center–Shreveport
Objectives: Librarians at an academic health sciences center offer a database searching class for third-year medical students during their surgery rotation. Students completed in-class "ten-minute clinical challenges" based on case scenarios to reinforce the search techniques demonstrated. However, the instructors integrated a more innovative exercise using the *Edwin Smith Surgical Papyrus* to emphasize concepts presented, while incorporating the history of medicine.
Methods: This hour-long class is taught every six weeks to twenty medical students. The new approach utilizes the *Surgical Papyrus*, an online resource that is part of the National Library of Medicine's "Turning the Pages" digital initiative. Students are divided into teams, and each team is assigned a unique case scenario from the *Surgical Papyrus*, a seventeenth-century B.C. medical text with diagnoses and treatments. Team members search current medical literature using the databases taught in class for therapies that would be available today for conditions and diseases presented in the *Surgical Papyrus.* Vintage surgical instruments and historic books are displayed in the classroom to enhance the learning experience. An amputation kit, skull trephine, and early anesthesia delivery devices complement surgical monographs from the eighteenth and nineteenth centuries, including a printed edition of the *Surgical Papyrus.*
Results: During the assignment, the students are quite engaged. They are fascinated by the treatments for traumatic injuries in the seventeenth century B.C., especially when compared to current therapies. At the end of class, each student completes an evaluation form. Results of these evaluations are positive, demonstrating that the students enjoy the *Surgical Papyrus* exercise.
Conclusions: The medical students are not only taught how to search library resources, but also about the history of medicine. They are exposed to the ancient text, the *Surgical Papyrus*, as well as historic surgical instruments and books. Furthermore, this innovative approach is an excellent way to promote the history of medicine collection and the archives, two areas of the library often overlooked. This combination of surgery, history, and searching techniques has proven to be an effective approach to learning.

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Changing Our Game? A Look at Position Descriptions in Health Sciences Libraries

Karen D. McMullen, Head, Access Services; **Felicia Yeh, AHIP,** Assistant Director, Collections Management; School of Medicine Library, University of South Carolina–Columbia
Objectives: To provide an overview of a current study designed to identify the impact of emerging trends of health sciences librarianship on existing and newly developed position descriptions in health sciences libraries.
Methods: Librarians at the University of South Carolina School of Medicine Library conducted a survey to help understand the emerging trends of professional positions in health sciences libraries and their impact on the institutions' position descriptions. The survey was sent to members of the Hospital Libraries Section (HLS) of the Medical Library Association and the Association of Academic Health Sciences Libraries (AAHSL) discussion lists. Via the survey, position descriptions were collected to publish an updated Medical Library Association DocKit. The authors also compiled and analyzed data collected from the survey. The analysis provides information on how health sciences libraries are making changes to their position descriptions, while facing the challenges of emerging trends.
Results: Survey results and position descriptions collected were compiled to be included in the DocKit. The DocKit will be published by the Medical Library Association in early 2012. Our findings indicated that, although position descriptions are created or revised due to emerging trends, more health sciences libraries than expected are keeping their traditional position descriptions despite changes in job duties.
Conclusion: This poster demonstrates emerging trends in health sciences librarianship positions. The DocKit will be a one-stop publication for health sciences librarians to review up-to-date medical librarianship position descriptions. In addition, it will be beneficial for administrators, supervisors, job seekers, and students interested in pursuing a career in medical librarianship. This project reflects that many of the health sciences libraries participating in the survey are "changing their game" with emerging trends of position descriptions.

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Changing the Game: Preferred Models of Integrating Information Literacy into the Nursing Curriculum, a Survey of Faculty at a Community College

Michelle E. Rezeau, Student, Certificate of Advanced Study in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Assistant Professor/Librarian, BCC/UCF Joint Use Library, Brevard Community College, Cocoa, FL
Objectives: This survey will determine which models of integrating information literacy (IL) into the curriculum are preferred by nursing faculty and will examine which level of IL skills faculty

believe students must master before graduating. Results will identify ways library and nursing faculty may collaborate in the future to develop a truly integrated IL nursing curriculum.
Methods: Setting: An academic library serving the institute of nursing's associate in science (RN) and vocational certificate (licensed practical nurse [LPN] and patient care assistant) programs. Background: Current IL instruction for nursing consists of the on-demand model, where the liaison librarian provides a library orientation and overview of discipline-specific resources during the first semester of the RN and LPN programs and an in-depth demonstration of how to find research articles in CINAHL during the fourth and final semester of the RN curriculum. Description: An original survey was developed and distributed online in January 2012 to nursing faculty at all campuses. Some survey questions were constructed using models identified by Susan Carol Curzon in "Integrating Information Literacy into the Higher Education Curriculum" (2004). Other questions were based on the college's core abilities process information rubric. Data were analyzed to determine faculty preferences.
Results: The survey resulted in a 58% response rate, with 67% of the faculty teaching in the RN program. The preferred model of integrating information literacy (IL) into the nursing curriculum was the learning outcomes model (50%), which uses a tiered approach to integrate research skills into specific nursing courses systematically, building the necessary skills over several semesters. The general education model was second in preference (44%), where students acquire IL skills in general education courses such as "Communications I" or "Fundamentals of Speech." Models of integration are not necessarily mutually exclusive, and respondents were allowed to select more than 1 preferred model. The IL proficiency level expected of a nursing student at graduation was split between the professional level (28%) and the apprentice level (28%). The college's core abilities process information rubric identifies 5 levels of IL proficiency, where professional is the second highest level and apprentice is the second lowest. The faculty were also asked to select barriers to integrating IL into the curriculum; multiple responses were allowed. Lack of time to teach research skills and space limitations within the existing curricula (61% each) were the biggest barriers to integration. When asked if faculty were willing to collaborate with a librarian to integrate IL into the nursing curriculum, 56% said yes and 44% said no. The survey also asked faculty to rank on a scale of 1–5 from extremely important to not at all important a list of IL skills needed before entering the nursing program and at graduation from the program. Respondents rated most IL skills extremely or quite important both at program entry and at program conclusion. The similarity of results between before and after could indicate a flaw in question design.
Conclusions: The majority of respondents preferred the learning outcomes model of IL integration, which provides an opportunity for the liaison librarian to collaborate with nursing faculty. Faculty may need to be educated on challenges of relying on the general education model of IL integration. Often there are several semesters or even years between general education and nursing coursework. General education coursework does not incorporate nursing resources nor does it focus on the American Psychological Association citation format. Differences in IL proficiency level expectations between faculty could affect the breadth and depth of research skills integrated into the nursing curriculum. Although the liaison librarian can assist with teaching skills and developing research-based assignments, the biggest barrier to overcome is finding room in the nursing curriculum for inclusion of IL. It may also be a challenge to get buy-in from faculty to integrate IL if they are not willing to collaborate with a librarian. Future opportunities for inquiry include identifying which nursing courses should incorporate IL and the progression of skills.

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Clinical Rounds and the iPad: Library and Librarian at the Point of Care

Lauren H. Yaeger, Medical Librarian, St. Louis Children's Hospital; **Susan A. Fowler,** Medical Librarian, Bernard Becker Medical Library, School of Medicine; **Betsy Kelly,** Associate Director, Health Information Resources and Assessment and Evaluation Coordinator, National Network of Libraries of Medicine, MidContinental Region, Becker Medical Library, School of Medicine; Washington University in St. Louis, St. Louis, MO
Objectives: We wanted to understand the benefits of, barriers to, and issues of a medical librarian participating in clinical rounds in an affiliated teaching hospital. We also examined the usefulness of having an iPad available to find literature relevant to questions at the point of care.
Methods: One librarian from an academic medical library asked the chief residents and the attending or fellow at an affiliated teaching hospital that she be allowed to join patient care teams on clinical rounds. Initially, the librarian focused on getting better acquainted with clinical terminology and the clinical environment. At the same time, however, she listened for opportunities to assist in answering clinical questions by using her iPad to query the available literature. Due to the pace of decision making, the librarian had to adjust her approach to literature searches and identifying answerable clinical questions. After each two-week rounding period, the librarian queried the teams about their perceptions of the value of having a librarian on the team. She also kept records about her experience using the iPad on patient care floors.

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Collection Assessment: Keeping Library Resources Current and Relevant

Jie Li, AHIP, Assistance Director, Collection Management; **Robert M. Britton, AHIP,** Electronic Resources/Collection Development Librarian; **Geneva B. Staggs, AHIP,** Assistant Director, Hospital Services; Charles M. Baugh Biomedical Library, University of South Alabama–Mobile
Objectives: This poster describes the development and implementation of University of South Alabama Biomedical Library's weeding process.
Methods: A weeding policy and checklist was developed, taking into consideration subject relevancy, alternative availability, any special features, historical value, date of publication, physical state of the item, language, usage statistics, and status as reprint or original. Multiple options for the disposal of weeded materials were explored. Record keeping tasks were delineated.
Results: Two sets of criteria were established, one for items to keep and another for items to be withdrawn. Criteria for retention included: items less than ten years old or used within the last ten years, atlas or anatomy books, nursing theory or theorist titles, history of medicine titles, and items of local historical interest. Criteria for de-selection included: items at least ten years old with

no usage in the past ten years, items whose subject areas are no longer of interest to the library's clients, items whose curriculum areas are no longer being taught by the university, materials available elsewhere locally or regionally, items in poor physical condition, and duplicate items. Cost-per-use for serials is considered for de-selecting. New editions of materials that have been used multiple times have been purchased. Materials discarded have been put on sale locally, while others have been donated to other libraries and international libraries. The library has removed the records of the discarded materials from its integrated library system, DOCLINE, and OCLC.
Conclusion: Development of a weeding policy is important for a coordinated and defensible weeding process to be used to keep library resources relevant and current.

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Combining Teams: Library Resources for Systems Biology and Global Health
Emily J. Glenn, Librarian, Seattle Biomedical Library, Seattle Biomedical Research Institute, Seattle, WA
Objectives: A global infectious disease research institute recently welcomed dozens of new systems biology researchers, becoming the only institute in the world to have both research programs fully integrated in one building. This expansion challenged the institute's library to leverage local and regional collection and provide a variety of "just in time" subject-specific resources and services to meet newcomers' expectations.
Methods: A multi-pronged strategy was used to ascertain the appropriateness of the collection prior to arrival of the new teams and after the new teams had been in place for one year. Prior to arrival, the librarian gathered information from the library manager at the system biologist's institute. Collections and services were discussed, enabling the formation of a side-by-side comparison of current resources. Based on the comparison, a stakeholder transition team provided guidance on new acquisitions. Transition team members also mediated library-related conversations between research teams and the librarian. Collection development sources were consulted, and a member of the new labs joined the library's advisory committee to further provide input.
Results: A number of existing resources were determined to be relevant to both groups of researchers. Several new items were selected based on input from both groups. The majority of resources collected at the system biologist's institute were determined to be either too narrowly focused or not relevant to the group of new researchers. After one year, the librarian surveyed all staff to determine satisfaction with the collection's content, subject focus, and formats and to identify opportunities for sustainable growth to support forthcoming projects.
Conclusions: By being involved in the transition planning process, the librarian was able to gather information about people and resources, establish working groups, and create a plan to meet the needs of a new group of users. By including them in an advisory committee, new systems biology researchers felt represented. Incremental outreach, as guided by the institute's transition plan, was effective for building relationships. Resources selected were generally considered appropriate, yet, as a small collection, not comprehensive.

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Consenting Adults: An Interdisciplinary Approach to Improving Patient Care via the Informed Consent Process
Margo Coletti, AHIP, Director, Knowledge Services, Beth Israel Deaconess Medical Center, Boston, MA
Objectives: To improve patient care at a teaching and research hospital by creating a patient-centered informed consent process.
Methods: With the original intention to improve the readability of informed consent documents, the director of knowledge services contacted an attorney from hospital counsel to collaborate on a workshop for informed consent writers. The project quickly grew in both concept and team membership with every added team member suggesting another discipline to involve. The team grew to include legal, risk management, community affairs, interpreter services, human subject protection office (HSPO) and the institutional review board (IRB). The group broadened the scope of the instruction to a comprehensive approach with the objective of improving patient care through the informed consent process.
Results: The end product, now in its third year, is a quarterly half-day workshop called "Consenting Adults: An Informed Consent Workshop." The workshop is designed for anyone involved with the informed consent process: clinicians, researchers, technicians, nurses, physician assistants, etc. It covers the components of the informed consent process, legal and ethical issues, health literacy, plain language principles, assessment of patient comprehension, and consenting persons with limited English proficiency. The workshop, cosponsored by knowledge services and the HSPO, offers both continuing medical education category 1 risk management credits and nursing contact hours. The faculty consists of six instructors: a physician; an attorney/social worker/ethicist; a member of the IRB; and directors of knowledge services, interpreter services, and community affairs.

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Developing Standards for Sequencing Methods Reporting
Pamela Shaw, Biosciences and Bioinformatics Librarian, Galter Health Sciences Library, Northwestern University, Chicago, IL; **Simon Lin,** Director, Biomedical Informatics Research Center, Marshfield Clinic Research Foundation, Marshfield, WI
Objectives: Bioinformatics methods are becoming common in biomedical publication. No guidelines exist for reporting of bioinformatics and data analysis methods to guide authors who publish research in genome sequencing—specifically ChIP-Seq and RNA-Seq experiments—so duplication of data analysis methods by other labs is difficult, if not impossible. This project mined sequencing methods text in order to recommend best-practice data analysis reporting.
Methods: PubMed was searched for manuscripts reporting sequencing experiments using ChIP-Seq or RNA-Seq as keywords searched in all fields. In an alternate search protocol, methods sections from full-text articles at PubMed Central, BioMed Central, and Public Library of Science (PLoS) were searched for ChIP-Seq or RNA-Seq. After a set of manuscripts for each type of sequencing was identified and selected, full text from each article was searched for data analysis methods descriptions. Full text of data analysis or bioinformatics methods was copied and pasted into a spreadsheet matrix, which also contained fields for citation information and sequencing platform. The spreadsheet information was transferred to an SQL database for further analysis, such as frequently used terms across manuscripts, in attempt to derive

a standard language for the techniques. Samples of minimal, adequate, and optimal data methods were selected to be presented to sequencing data workgroups convened by the Food and Drug Administration.
Results: Typical minimal methods consisted of authors' referring to previously published papers on a method or writing a single sentence on data analysis methods (e.g., "Sequenced DNAs were mapped into a chicken genome database with the MAQ program" [Shang, et al. 2010]). Adequate methods expanded on minimal methods by specifying sequence read length, sequencing software settings used, whether reads were paired or single-end reads, and including defining criteria for mapping quality scores for further analysis. Optimal data methods were often found in manuscripts, which included supplementary material for their methods sections, and thus outlined all sequencing data handling steps in detail, including methods for trimming sequences and details of mapping algorithm development and modification.

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Emergency Preparedness and Librarians: A Match Made in... Hospitals!
Amy E. Donahue, AHIP, Medical Librarian, Resource Center Library, Aurora Medical Center, Grafton, WI
Objectives: The objective of this poster is to look at whether hospital librarians are actively involved in their organizations' emergency and disaster preparedness activities and to explore what those roles can and might look like to encourage further involvement. Involvement may range from sitting on committees to finding and providing related information to community outreach and everything in between.
Methods: This will be a mixed-method project, consisting of a case report, a narrative review of the literature (including gray literature), and a descriptive survey. The case study will be the author's experiences with her hospital emergency preparedness committee and the roles she has played since getting involved, including literature searches for emergency preparedness activities and working on outreach to both hospital employees and community members. The literature review will build off of Featherstone et al.'s *Journey of the Medical Library Association* paper, "Library Roles in Disaster Response: An Oral History Project by the National Library of Medicine" (PMID: 18974811) and will look specifically at the roles hospital librarians are playing in their organizations. The survey will be sent out over MEDLIB-L, DISASTR-OUTREACH-LIB, and the MLA Hospital Librarians email discussion list to collect responses from hospital librarians on whether they are currently involved with emergency preparedness activities within their organizations, and, if so, how.
Results: The author's own experience with her emergency preparedness committee over the course of her first year of employment has served as a case report. The literature review led to more than ten articles in MEDLINE, seven articles in CINAHL, and a number of reports and anecdotes in the gray literature describing ways hospital librarians are currently involved in disaster and emergency preparedness, response, and recovery activities as well as potential roles. The final survey results will be made available in full on the poster itself, but the preliminary results indicate that around a third of respondents are currently involved in emergency or disaster roles at their hospital, that a number play multiple roles, and that often even those librarians who are not actively involved have still identified or been assigned a role should a disaster affecting their organizations occur.
Conclusions: Hospital librarians can be and are involved with emergency/disaster preparedness, response, and recovery. Moreover, opportunities exist for continued and increased involvement, and while many would gladly volunteer, some librarians may be asked to take on these challenging and rewarding roles even if they have not expressed interest. By documenting and connecting the collective hospital librarian experience, perhaps we can all be better prepared to respond to our hospitals' and our communities' needs in this vital area.

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E-Readers on Deck: Supporting Patients, Caregivers, and Staff
Priscilla Stephenson, Chief, Library Service/Medical Media, Philadelphia VA Medical Center, Philadelphia, PA; **Teresa R. Coady,** Library Manager and Medical Librarian, Library Service, VA Central Iowa Healthcare System–Des Moines; **Janet M. Schneider, AHIP,** Chief, Library Service, James A. Haley Veterans' Hospital, Tampa, FL; **Dorothy Sinha, AHIP,** Director, Library Service, Minneapolis VA Healthcare System, Minneapolis, MN
Objectives: Four hospital libraries affiliated with a national health care system designed programs to test the viability of using e-readers to provide resources for staff, patients, and caregivers. E-readers provide a unique opportunity to provide staff development training and patient education. This poster describes the similarities and differences of each program and suggests best practices for implementing similar projects.
Methods: The medical library initiated a literature and medicine book club for staff using books about patient centeredness, leadership, and learning organizations. At the hospital, librarians collaborated with speech pathologists working to rehabilitate stroke patients. Patients with aphasia and alexia used Kindles and MP3 players to redevelop reading skills by simultaneously listening to books on the MP3 players, while reading the Kindle displays. In the health care system, caregivers of patients with Alzheimer's disease, traumatic brain injury, and stroke will use e-readers to access health care information aimed to support their caregiving role. At the medical center a palliative care/hospice unit is evaluating e-readers. Staff use e-readers to read clinical and board-review titles, while family members and patients use another e-reader collection focusing on caregiving and end-of-life issues.

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E-Science Bootcamp in a Box: This Side up
Bart Ragon, Associate Director, Knowledge Integration, Research, and Technology; **Elaine Attridge,** Marketing and Communications Librarian; **Andrea S. Horne,** Research and Data Services Manager; Claude Moore Health Sciences Library, University of Virginia–Charlottesville
Objectives: To advance the knowledge of librarians who support researchers needs involving data collection, retention, and sharing.
Methods: An academic health sciences library created the "eScience Bootcamp" to promote direct communication between librarians and the researchers they serve. Using a mini-med school model, the "eScience Bootcamp" provided librarians with

a better understanding of day-to-day work flow needs and the processes researchers use by offering a firsthand look at their practical experiences with managing research data. Support for the "eScience Bootcamp" was provided by the National Network of Libraries of Medicine (NN/LM), Southeastern/Atlantic Region (SE/A), and the Mid-Atlantic Chapter of the Medical Library Association. A "Bootcamp in a Box" web-based toolkit was later developed by members of the SE/A region to share the knowledge learned and help other librarian groups plan similar events.
Background: E-science is dynamically reshaping collaboration and workflows in science and creating unique and important opportunities for librarianship. In the spring of 2010, an academic health sciences library hosted the "eScience Bootcamp" to promote understanding amongst librarians of the many issues involved in this emerging field. Reflecting on the planning process, there were many aspects that went well, and some things that would have been helpful to know beforehand. The toolkit represents the best practices learned from planning this type of event.
Results and Conclusions: The "eScience Bootcamp in a Box" website was made available to librarians and other information professionals at blog.hsl.virginia.edu/bcamp/.

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Evaluation of a Medical Library's Clinical Librarianship Program for Family Medicine Physicians and Residents: Investigating Physicians' Perspectives

Kefeng (Maylene) Qiu, AHIP, Evidence-Based Healthcare and Clinical Liaison Librarian, Biomedical Library, University of Pennsylvania–Philadelphia

Objectives: This research project aims to investigate physicians' perspectives on a clinical librarianship program in support of the Family Medicine Department at Johnson City Medical Center (JCMC), affiliated with East Tennessee State University.
Methods: Study questions were developed by a research project investigator. Volunteers were solicited from current physicians and residents of the Family Medicine Department. Project assistants were hired to interview the study participants, audiotape their conversations, and transcribe the interviews. Investigators reviewed the transcripts, highlighted key terms and concepts, and grouped terms into thematic categories. After independently analyzing each of the transcripts, the two investigators met to compare coding and determine theme categories and ultimately reached consensus. A conceptual analysis of interviews was performed, and results will be obtained.
Results: A convenience sample was studied that included 11 participants, representing 40% of the residents and the attending physicians in the Family Medicine Department. The transcripts were coded, and 5 themes were identified as time, influence, attitude, behavior, and weakness. All interviewees acknowledged that the librarians' contribution in literature search saved their time. Most of the interviewees stated that the information they received from the librarians helped them make informed decisions, particularly when patients presented rare conditions. All interviewees recognized the librarians' knowledge and their professional service. The influence of information search behavior on the clinicians involved in the clinical librarianship program varied. All clinicians interviewed stated that not all questions had been satisfactorily answered.
Conclusions: The physicians in the Family Medicine Department at JCMC strongly recognized the clinical librarianship program. Librarians' contribution in literature search can considerably support physicians in their clinical practice. To improve this service, librarians may need to develop strategies to positively affect the physicians' information search habits.

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Exploring the Backgrounds of Health Sciences Librarians

Yani L. Yancey, Student, Certificate of Advanced Study in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Outreach Librarian, Office of Communications, and Public Liaison, National Library of Medicine, Burtonsville, MD

Objective: To identify trends in the pre-master's of library science educational backgrounds of health sciences librarians and in their motivation for entering the field, compared to other types of librarians. This information will be useful in improving recruitment strategies.
Methods: Data were collected through an online survey distributed to librarians and library school students on various professional email discussion lists for health sciences librarians, law librarians, academic librarians, and sci-tech librarians; 933 surveys were returned.
Results and Discussion: Analysis of the survey data is currently in progress.

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From Max to Macs: Creating a Retrospective of Medical Illustration Techniques

Kate Saylor, Outreach Librarian, Taubman Health Sciences Library; **Elena Azadbakht,** Student, School of Information; **Patricia Beals; Jonathan Higgins;** University of Michigan–Ann Arbor

Objectives: This poster will discuss the plans and partnerships that led to the development of the "From Max to Macs: A Retrospective of Medical Illustration Techniques from Pioneering Medical Illustrators Like Max Brödel to the Digital Tools of the Twenty-First Century" exhibit and workshop.
Methods: Medical artists elucidate medical procedures and record pathologies by illustrating the intricate structure of the human body. They have done this for over two millennia. This exhibit explored the history of medical illustration through the evolution of artistic techniques, tools, and technology. Featured artwork was submitted by graduates of the University of Michigan School of Art Program in Medical and Biological Illustration. Rare book materials from the University of Michigan Library collection were also featured in this exhibit. This poster will explain the process of creating an exhibit from scratch and future plans to convert it to an online exhibit.

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Getting into the Game: Inaugurating a Clinical Librarian Program

Laura E. Abate, Electronic Resources and Instructional Librarian, Himmelfarb Health Sciences Library; **Alexandra Gomes, AHIP,** Associate Director, Education, Information and Technology Services, Himmelfarb Health Sciences Library; **Anne Linton, AHIP,** Director, Himmelfarb Health Sciences Library, School of Medicine and Health Sciences; George Washington University, Washington, DC

Objectives: Librarians worked closely with the internal medicine residency program to provide training and support; however, many residents seemed unaware of the library's collections

and services. To strengthen the relationship between the library and the program and to enhance residents' use of information resources, a librarian was assigned to attend the residents' daily morning meeting at least twice each week.
Methods: With the support of the residency program director, a librarian began attending the residents' morning meeting at least twice each week. The librarian would listen carefully to the case-oriented discussion and instruction to identify questions that were not fully addressed and then try to locate the "answers" in real-time. While some questions could be addressed fully within a meeting, other questions required more in-depth research. The librarian developed a system of emailing questions and answers in the form of linked resources, and this method quickly evolved into the use of a LibGuide to provide program-wide access to the questions and answers or resources. The librarian also sought to create a positive relationship with the chief residents who oversee morning meeting and collaborated with them to provide information support for additional components of the curriculum including noon conference and morning report.
Conclusions: With the clinical librarian program in place, the librarian continues to assess and refine methods for connecting residents to information and information resources.

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Growing Global Opportunities: Taking Continuing Education to a Land Down Under
Connie Schardt, AHIP, FMLA, Associate Director, Research and Education Services, Medical Center Library & Archives, Duke University, Durham, NC; **Lisa Kruesi,** Associate Director, Herston Health Sciences Library, University of Queensland–Brisbane, Australia; **Angela E. Myatt,** Liaison Librarian, Briscoe Library, University of Texas Health Science Center–San Antonio
Objectives: To expand the opportunities for continuing education (CE) to the international medical librarian community.
Methods: The evidence-based medicine (EBM) and the medical librarian course broke new ground as a collaborative effort between a library school and MLA in providing an opportunity for students and practicing librarians to participate in a distance education course. The course allows librarians working across the US to engage in timely studies with all the benefits of distance education. A welcomed consequence was the enrollment of librarians from around the globe. For the last three years, we have had a consistent enrollment of three to five Australian librarians per semester. This led to a collaboration between five Australian medical librarians and the two US instructors to plan and deliver an on-site EBM workshop in Brisbane. The poster will describe the steps taken to change our game,–from a local CE course to an international seminar.

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Growing Opportunities in the Hospital Library: Measuring the Collection Needs of Hospital Clinicians
Meredith Bloom, Student, Certificate of Advanced Study in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Health and Life Science Librarian, Louise M. Darling Biomedical Library, University of California–Los Angeles; **Lisa Marks, AHIP,** Manager, Library Services, Health Science Library, Providence Saint Joseph Medical Center, Burbank, CA
Objectives: This project will investigate and determine whether it is worth canceling lesser-used journal titles to make funds available for adding more electronic titles in a medium-sized, nonteaching hospital library. The goal of this project is to create a more well-rounded and useful electronic collection based on the needs of the hospital's clinicians.
Methods: The library's usage statistics for print and electronic titles were consulted to calculate which journals are heavily used and which are underutilized. Based on these results, medical staff committee members from several medical specialties were given surveys asking if they approve of canceling lesser-used titles in their specialties, and whether there are any new titles they would like to see in the library's digital collection. This information, along with the library's budget, will be used to make final acquisition and weeding decisions for 2012.
Results: Based on usage statistics and clinician survey results, the library canceled fourteen journal titles. This allowed the library enough funds to add two new electronic access journal titles that were requested by hospital clinicians, while staying within the 2012 budget. If more journal titles are requested, the library may be able to use a physicians' account dedicated to the library.
Conclusion: The collection is now more tailored to the needs of the hospital's clinicians, and clinicians are more aware of all that the library has to offer.

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Health Information Ambassador Program for Patient Education: A Game Changing Partnership
Laura Stubblefield, AHIP, Manager, Library Services, Medical Library, Sharp Memorial Hospital, San Diego, CA; **Jacqueline Davis,** Cushman Consumer Health Library, Community Health Library, Sharp HealthCare, San Diego, CA
Objectives: To extend the core services of the consumer health library beyond the walls to the bedside for patients and families during the hospital stay, and to continue the relationship through and after discharge. To empower patients to be their own best advocates and to increase their sense of value and collaboration on the health care team.
Methods: In partnership with the volunteer department and the consumer health librarian, the volunteer is trained to complete the following steps during their shift as the health information ambassador: connect with the librarian, round on hospital patients to fill out the information request, return to the librarian to obtain the health information, and ultimately deliver the information back to the patient. The poster will identify the design, deployment, and improvement cycles of the program.
Results: Both qualitative stories and quantitative statistical results demonstrate the benefits of providing accurate and reliable patient education. Patient satisfaction is regularly reported, and families express gratitude for the opportunity to gain knowledge to which, through this program, they now have access. The volunteer educates both patients and families as to where on the Internet they can find quality health information when doing their own health research.
Conclusion: The effort to bring this extra care to the patients, through quality patient information, has served to educate the patient, create a sensitive and personalized experience for the patient, created links for patients to other departments (i.e., nutrition and diabetes departments), effectively marketed the services of the library to the staff, and expand the scope of the support from the library throughout the hospital.

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Health Literacy in the Dental Clinic: Are Patients' Needs Being Met? A Study of Patients' Health Literacy Rates and the Readability of Available Written Education Materials

Julie H. Schiavo, AHIP, Student, Certificate of Advanced Study in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Reference Librarian, School of Dentistry Library, Louisiana State University Health Sciences Center–New Orleans

Objectives: The purpose of this study is to evaluate the health literacy levels of the patients being evaluated for treatment at the Louisiana State University Health Sciences Center-New Orleans School of Dentistry student dental clinic and measure the readability of the patient education handouts that are available. This study will attempt to determine if the education materials are at a reading level that is accessible to the patients.

Methods: This is a descriptive study of the patients being evaluated for treatment at a school of dentistry student clinic. During screening appointments the patients will be administered the brief health literacy questionnaire developed by Chew, Bradley, and Boyko in 2004 to identify those with inadequate health literacy. In addition to the descriptive study of the patients, an analysis of the readability of the patient education handouts available in the clinic will be conducted. Patient education materials in the waiting area will be evaluated using the Simplified Measure of Gobbledygook (SMOG) readability evaluation tool.

Results: Survey of the dental patients is ongoing, and results are forthcoming. The reading levels of the patient education handouts revealed an average SMOG grade of 9.42. This grade is above the recommended reading level for patient education materials.

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Hitting a Moving Target: Resource Access in a Mobile World

Whitney Townsend, Liaison Services Librarian and Coordinator, Health Sciences Executive Research Service; **Carol Shannon,** Liaison and Information Services Librarian; Taubman Health Sciences Library, University of Michigan–Ann Arbor

Objectives: To demonstrate the evolution of instruction on and access to mobile resources in an academic health sciences library environment.

Methods: Mobile devices and mobile resources are increasingly embedded in all aspects of health sciences clinical, research, and educational activities. Librarians have the opportunity to demonstrate immediate value-add to their primary clientele by providing quick access to free and library subscription mobile resources. This poster will present a library's evolving methods of disseminating information about mobile resources in an undergraduate and graduate medical education program, including curriculum-integrated instruction on mobile resources, an online resource guide to mobile resources, challenges and solutions to information access in the mobile environment, and opportunities for collaboration and resource development.

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Improving Quality and Performance in Public Health: Potential Roles for Health Information Professionals

Kathleen A. Amos, AHIP, Project Manager, Council on Linkages Between Academia and Public Health Practice, Public Health Foundation, Washington, DC; **Patrick McLaughlin,** Technical Information Specialist, National Library of Medicine, Bethesda, MD

Objectives: To identify opportunities presented by the growing emphasis in public health on improving quality and performance for health information professionals to strengthen support for public health practitioners and organizations.

Methods: The recent launch of national voluntary public health department accreditation by the Public Health Accreditation Board (PHAB) has focused attention on the importance of public health quality and performance. The PHAB Standards and Measures detail a set of organizational-level standards for health departments, much as the Council on Linkages Between Academia and Public Health Practice's (Council on Linkages) *Core Competencies for Public Health Professionals* describes individual-level skills and knowledge desirable for public health practitioners. An examination of these two core resources will be conducted to identify areas in which the skills and expertise of health information professionals are highly relevant to the activities of public health practice. Potential opportunities for information professionals to grow their services to new audiences and improve services to existing audiences will be proposed based on the areas identified.

Results and Conclusions: A review of the PHAB Standards and Measures and the Council on Linkages' *Core Competencies for Public Health Professionals* revealed multiple domains in which health information professionals could support public health practitioners and organizations. Health information skills and expertise, as detailed in the professional competency areas in the Medical Library Association's *Competencies for Lifelong Learning and Professional Success,* are highly relevant to many of the activities undertaken in public health practice, such as building an evidence base to support decision making, promoting an understanding and use of research, assessing health literacy, and informing and educating the populations served. With the growing emphasis on improving quality and performance in public health, the potential exists for health information professionals to expand their roles in assisting public health professionals and organizations in improving the health of the population.

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IndexCat and Google Books: Bringing the Past to the 21st Century

Isabel M. Altamirano, Graduate Student, School of Library & Information Science, Louisiana State University, and Interlibrary Loan Staff Member, Matas Library of the Health Sciences, Tulane University, New Orleans, LA

Objectives: To demonstrate that IndexCat verifies citations and that some of the older books and articles are available in Google Books.

Methods: The population is an academic health sciences library serving a school of medicine, school of public health, and biosciences programs. The interlibrary loan (ILL) staff has three members: one librarian supervising the department and two paraprofessionals performing both lending and borrowing activities. This poster will examine the use of bibliomining from the lending requests. Some older material cannot be lent nor scanned (due to poor condition). However, if the information is found through Google Books, the ILL staff can inform the other library its existence on the Internet.

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iPad Use in a Library: Experiences from Around the Diamond

Alicia A. Livinski, Informationist/Biomedical Librarian; **Douglas J. Joubert,** Emerging Technologies Librarian; NIH Library, National Institutes of Health, Bethesda, MD

Objectives: Purpose: Describe the planning, implementation, use, and evaluation of iPads in clinical and nonclinical settings as part of a library-wide initiative focused on mobile computing, social media, and Web 2.0 technologies. Eleven staff at a large government biomedical research institute library including informationists on clinical rounds and who work off-site with policy and public health staff and bioinformatics specialists.

Methods: The library purchased 11 first-generation 3G and WiFi iPads as part of its efforts to become the "go to" place at the National Institutes of Health (NIH) for mobile devices. The primary purpose of this study was to evaluate the use of the iPad in a clinical setting by informationists and, secondarily, its general use in different settings. Features evaluated included: utility for clinical rounds and mobile searching, challenges experienced, useful apps, and easily completed basic tasks. The development of learning objectives, deployment of iPads, training of staff, integration of staff proficiencies into annual performance plans, troubleshooting and maintenance of devices and operating systems, and implementation challenges encountered will be addressed. Evaluation methods included online surveys measuring staff perceptions of mobile devices before and after receiving a device, reviews of mobile apps, and qualitative information from iPad users.

Results/Outcomes: In January 2011, an Emerging Technologies Team (ETT) was formed to plan and assess the effective use of mobile devices by library staff and to support library staff development in these areas. The ETT worked closely with library leadership to match learning objectives to individual performance plans related to the use of the iPads. A formal pilot project ran from July-December 2011 with data collected on their experiences with using the iPad overall, different iPad features and functions, and how they specifically used it as part of their daily work. An online survey was administered at the conclusion of the pilot. One hundred percent of iPad users had a very good or good experience with using the iPad, 50% used it while on clinical rounds, and 50% as part of their professional duties. Additional details and recommendations from the iPad users will be shared on how to make the iPad a useful tool.

Conclusion: A number of challenges were experienced prior to the formal start of the pilot project, including the purchase of apps, use of 3G and WiFi, security concerns, and general training support. However, this project challenged staff to develop creative solutions and recommendations for use of the iPad in various settings, ultimately building staff competencies in mobile technologies.

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Iterative Design in Online Instruction: Using Module Grades and Student Feedback to Guide Content and Delivery Modifications

Barbara A. Gushrowski, AHIP, Access and Instructional Services Librarian, School of Dentistry, Indiana University–Indianapolis

Objectives: To review the effects of content modifications and changes in delivery mechanisms on student performance on assignments and quizzes in four online modules for a dental hygiene research course.

Methods: A comparison of student performance on assignments and quizzes associated with the modules each year from 2007–2011 and content analysis from student comments made in course assessments and email correspondence will be made. Summary: Changes in instruction were based on comments made by the students, item analysis on quizzes, and performance on quizzes and assignments. Topics that generated requests for clarity by the students were covered in more detail in subsequent tutorials. Some of the quiz questions were changed based on item analysis. Those questions that were missed by a majority of the students or those that many students indicated were confusing were reworded for clarity. Some of the technology issues were beyond the control of the instructor, but increased familiarity with the course management software and some additional guidance by courseware experts resulted in improved question development and presentation of the quizzes to the students. The change that made the most significant improvement for the students' comprehension was the additional of voice accompanying the PowerPoint slides, which allowed a reduction of the amount of text on the slides. This assessment of significance is based on the fact that only one student contacted the instructor regarding confusion over the information. Though overall scores have improved, the one area of difficulty for students that remains is their performance on the library catalog quiz. Specifically, the question regarding the availability of full-text items in the catalog has been the one question missed most often across all four years. This continues to confuse the students, which may be more a result of their experience with search engines and other databases that do lead them to full text. Students complete the library catalog assignment correctly, which indicates they are able to apply the information, but communicating the differences between a bibliographic database, a search engine, and the library catalog remains a challenge.

Conclusions: Analysis of student performance on individual quiz questions and assignments and the content of their questions led to incremental changes to the instruction. A comparison of the student performance across four years shows that student performance on assignments and quizzes have gradually improved. Further refinements are planned, and student performance will continue to be monitored.

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Lean CD: Establishing a Curriculum and Faculty-Driven Collection Development Model at an Emerging Medical Library

Stephanie M. Swanberg, Assistant Professor and Medical Librarian; **Misa Mi, AHIP,** Associate Professor and Medical Librarian; **Nancy Bulgarelli,** Director; William Beaumont School of Medicine Library, Oakland University, Rochester, MI

Objectives: Lean principles have been strategically used in manufacturing, software development, and higher education to improve quality, eliminate waste, and more evenly distribute costs. With the economic downturn and movement toward primarily electronic collections, a new medical library piloted a lean collection development (CD) model to fulfill the resource requirements and expectations of its medical school users.

Methods: The "Lean CD" model represents an integrated cycle of traditional and innovative strategies for library CD. In growing our infant collection, we must take into consideration financial, staff, and time constraints, while also meeting the needs of our users. As a result, rather than purchasing resources on the chance of future use, the library strategically selects items by way of tight integration in the curriculum and one-on-one collaborations with faculty. As characterized by a liaison system, library faculty are responsible for a specific set of disciplines in the curriculum and therefore research and manage those discipline collections. Once an initial scan is conducted, using tools such as Doody's Review and Journal Citation Reports, librarians partner with faculty to discuss and select only those resources relevant for the curriculum, research, and scholarship.
Results: Lean CD has proved an effective CD strategy for distributing precious staff, time, and finances. Medical school faculty appreciate the opportunity to have a voice in the selection of resources for the library, rather than being overwhelmed with a variety of titles that may not be relevant to the curriculum or outside activities. In the future, the library will begin constructing research guides for each course and various subjects, again looking to the curriculum and faculty for guidance in highlighting the most valuable resources.
Conclusion: As a pilot project in a new medical library, there is sufficient time and opportunity to evaluate the effectiveness of this technique and alter it to meet the evolving needs of the medical school curriculum and faculty. However, even when staff, time, and financial limitations have dissipated, this strategy will be a prime method of maintaining existing relationships and building new ones in the promotion of medical library resources and services.

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Leveraging Emerging Technology to Visually Promote Library Resources
Carolyn Schubert, Health Sciences and Nursing Librarian, East Campus Library, James Madison University, Harrisonburg, VA
Objectives: Use emerging technologies to create and deploy a virtual bookshelf of new books to increase circulation. Previous studies completed by the library have documented the increased circulation of materials upon creation of themed physical book displays.
Methods: Currently, visitors can setup an RSS feed for each month's new listing of title. However, circulation of materials remains low. Therefore, I will use virtual bookshelf technology with graphics, such as LibraryThing book covers, to promote new monographic materials for the health sciences and nursing departments. The virtual bookshelf will appear on the home page of the health sciences and nursing subject guides. Books will be manually added to the virtual bookshelf on a monthly basis, based on the existing new titles list of received monographs in these departments. The changed service will be promoted during library orientations and department meetings. Survey data, website statistics, and circulation statistics will help assess the effectiveness of the new technology and the propensity for increased resource usage.

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Librarians in Pharmacy Curriculum Transformation
Joanne Rich, Information Management Librarian; **Terry A. Jankowski, AHIP,** Head, Information and Education Services; Health Sciences Library, University of Washington–Seattle
Objectives: The recent rapid growth in the number of pharmacy schools has created renewed energy for existing schools to revise their programs in a competitive market. For the past two years, the school of pharmacy has been undergoing just such a revision. This poster describes the librarian liaisons' participation in evolving drug information literacy instruction in the pharmacy curriculum.
Methods: The course chairs for two core classes in the first and second years of the pharmacy curriculum, introduction to pharmacy practice and research design and analysis, changed two years ago bringing new perspectives to each course. This enabled transformative change to the curriculum, ensuring that students be exposed to content at relevant times. The librarian liaisons (who were already immersed in these courses) were invited to participate in restructuring library content for these courses. The liaisons met with the course chairs to discuss the logic and timing of various components of library lectures. The librarians were invited to become part of the instructional team by creating homework assignments, midterm and final exam questions, and class support materials as well as grading assignments and lecturing. Librarians were granted collaborator privileges in the course management software in order to do this.
Results: The main thrust of the new curricular goals was to introduce many concepts initially and have the students build their expertise gradually in a holistic manner rather than focus on isolated knowledge and skills acquisition in stepwise manner. Content of librarian lectures shifted from matter-of-fact descriptions of resource tools to instruction on the evaluation of Internet and electronic materials. Librarians were invited to be present during relevant lab sessions to act as information resource support for the students. Librarians worked more intimately with faculty and student assistants to address student needs and concerns. Librarian workload increased dramatically due to the increased activities, especially grading of homework!
Conclusion: Changes in the curriculum afforded us as a library and as liaisons a welcome opportunity to review and build on our own instructional practice, content, and tools. After having gone through this revision process with the faculty and understanding the dynamism inherent in the course restructuring, we are better able to work with the faculty and student assistants to advocate for library instructional content in order to successfully enhance student learning.

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MedlinePlus Connect: Planning for Clinical Coding System Changes
Kristen Burgess, NLM Associate Fellow, National Library of Medicine, Health Sciences Library, University of Cincinnati, Cincinnati, OH; **Stephanie N. Dennis,** Technical Information Specialist, Reference and Web Services; **Naomi Miller,** Manager, Consumer Health Information; Public Services Division, National Library of Medicine, Bethesda, MD
Objectives: MedlinePlus Connect accepts requests for information on diagnoses in electronic health records and provides matching information from MedlinePlus, a consumer health information website. MedlinePlus Connect currently supports International Classification of Diseases (ICD)-9-CM requests but will support ICD-10-CM by October 2013 when the Centers for Medicare and Medicaid Services will require it. This project

explores the methodology for MedlinePlus Connect supporting ICD-10-CM requests.
Methods: Research on the transition to ICD-10-CM and the differences between ICD-9-CM and ICD-10-CM was conducted. Based on this research, the General Equivalence Mappings (GEMs) released by the National Center for Health Statistics were applied to the current MedlinePlus health topic mappings to determine associations between ICD-10-CM and the health topics. The GEMs are forward and backward mappings between ICD-9-CM and ICD-10-CM, and indicate if a proposed mapping is identical or approximate. The author analyzed a random sample of these ICD-10-CM to MedlinePlus Health Topic mappings, as well as a purposive sample of codes within particular code groupings. Results will be compared with a separate mapping that uses the Unified Medical Language System (UMLS) to map the MedlinePlus Health Topics and ICD-10-CM.
Results: ICD-10-CM is approximately 5 times larger than ICD-9-CM and includes greater laterality, specificity, and encounter specifications. Of the 23,485 code pairs in the GEMs forward mapping file from ICD-9-CM to ICD-10-CM, 17,157 could be associated with a MedlinePlus Health Topic. Analysis of an initial random sample from this combined GEMs and Health Topics file indicated that roughly 80% of mappings flagged as approximate and 96% of mappings flagged as identical provide appropriate mappings between ICD-10-CM and the Health Topics. Analysis of code groups from the "Injury, Poisoning, and Certain Other Consequences of External Causes" chapter indicated patterns that will assist future mappings between ICD-10-CM and the Health Topics. Results from the UMLS mapping are pending.
Conclusions: Two potential methods are available to transition the MedlinePlus Health Topics from ICD-9-CM to ICD-10-CM. While analysis is ongoing and the best method has yet to be determined, the process will likely include automated methods combined with human review. Particular categories of the diagnosis codes will require more scrutiny. Regardless, MedlinePlus Connect will support ICD-10-CM prior to October 2013.

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Moneyball Tactics: A Game Changer for PubMed Mobile

Kathleen N. Carlson, AHIP, Education Librarian/Associate Librarian, Arizona Health Sciences Library, College of Medicine, University of Arizona–Phoenix; **Sheila Hofstetter, AHIP,** Health Sciences Librarian and Associate Librarian, Noble Science and Engineering Library, Arizona State University–Tempe

Objectives: Search title or Medical Subject Heading (MeSH) in PubMed Mobile using shortcuts. Also reduce the number of keystrokes and screen changes per user preferences. Learn search tips from expert Cochrane searchers. Images of search interventions on PubMed Mobile. Images of short cut search strategies: title field (TI), MeSH, and Cochrane recommended patient/problem, intervention, comparison, outcome (PICO) priority search elements in a beginning search.
Methods: Seattle fans are thrilled with PubMed's announcement that it is adding a new team to its suite of mobile apps: PubMed Mobile. The team recruited the highly sought after free agent player Moe Pub, the recipient of the Evidence-Based Practice Manager of the Year. In front of his fans and the media, Moe Pub says, "I want open access to all baseball fans." In an exclusive interview at MLA '12, Moe Pub shares inside tips on "Moneyball" tactics based on sabermetrics that allow his pitchers to know when to use the right pitch that make his strategies a game changer. Moe Pub says Archie Cochrane was the first to stumble across sabermetrics back in the 1940s, because he had learned back then that experts do not know everything.

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North Carolina Regional Extension Center: Next Steps

Adam Dodd, Web/Database Developer, University of North Carolina–Chapel Hill

Objectives: The North Carolina Area Health Education Center (NCAHEC) Quality Source program works with primary care providers to improve quality outcomes and to achieve meaningful use standards as outlined by the US Department of Health and Human Services Office of the National Coordinator for Health Information Technology. The NCAHEC program, received designation as the Regional Extension Center (REC) for North Carolina. We have worked to develop a sustainability plan for services offered once federal funding is discontinued.
Methods: Develop our knowledge of the business models of other RECs and/or consulting organizations for electronic health record (HER) support and usage for quality initiatives. Base on the above foundation, we have worked toward:
1. identifying concentrations of specialty practices (physicians-absolute, not per capita)
2. developing and executing a consulting services pilot with specialty practices in NCAHEC region.
3. evaluating a field pilot with specialty practices.

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Notes from a Clinical Librarian's Experience Rounding with an iPad

Amy L. Harper, Clinical Librarian, Health Sciences Library, University of Washington–Seattle

Objectives: To describe one clinical librarian's experience rounding with the care team in a trauma/surgical intensive care unit (ICU) at a level-1 trauma academic medical center equipped with an iPad with WiFi access. This was the first instance of rounding with a mobile device by a librarian at the medical center, and challenges and successes were documented.
Methods: Rounding with an iPad in the trauma/surgical ICU (TSICU) was motivated out of the recognition that outcomes improvement in the care of critically ill patients is driven by the application of evidence-based diagnosis and therapy. Patient care goals and decisions are often made at the bedside during rounds in the TSICU making it an appropriate setting for testing the utility of an iPad, which hypothetically would facilitate the instant identification and retrieval of such information. The clinical librarian requested and received the iPad through an internal library award and documented approximately one month of intensive use during daily rounds with one of the TSICU care teams. Prior to rounding with the team, familiarity was gained with using the iPad and free medical apps were selected for use.
Results: During the documented one-month period, the clinical librarian received thirty-eight questions, fifteen of which were guideline/protocol related and twenty-eight of which were non-guideline related. Of these, eight were related to therapy, five to diagnosis, four to background information, three to harm, two were known articles, and one related to prognosis information. The most commonly accessed resource via the iPad was the standard version of PubMed. Drug information resources were the second most accessed apps.

Conclusions: Rounding with an iPad in the TSICU proved to be a feasible activity. The learning curve for understanding the TSICU environment and clinical issues was quite high, but using the iPad was not a difficult activity. The iPad interface is intuitive to use and is easy to pass around to the team for reviewing at the bedside. Feedback from the attending physicians, residents, and allied health professionals was overwhelmingly positive for having a clinical librarian equipped with an iPad round with the care team, and the clinical librarian now routinely rounds in the TSICU with requests to round in additional ICUs.

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On the Same Side: Teaming up with Your Information Technology Department

Patricia J. Devine, Network Outreach Coordinator, National Network of Libraries of Medicine, Pacific Northwest Region; **Ann Gleason,** Head, Systems, Health Sciences Libraries; **Adam Garrett,** Systems Manager, Health Sciences Libraries; University of Washington–Seattle

Objectives: Librarians rely on technical support to accomplish their goals, perform their mission, and make information available. Yet for many, the relationship between the library and the information technology (IT) department is an adversarial one. How can we improve? What steps can we take to make sure we play on the same team?

Methods: Communication is key to holding it all together. Talk early, talk often, talk again. Checking with your IT support before you write a proposal for funding for new mobile devices is important! IT standards at your institution need to be followed. Making sure your IT people understand your mission, your users, and how they access the resources is important and can be accomplished by regular meetings. Don't wait until there is a problem to let your IT people know what you are doing in the library. They are part of your staff. Invite them to the parties, to the after work get-togethers, and most importantly to the staff meetings. Serve on committees together, and form an IT committee with representatives from each department. Learning about each other's work helps both librarians and IT people do a better job more efficiently.

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Online Library for Faculty Development in the Health Professions

Rita Shaughnessy, Library and Information Specialist, Department of Family and Community Medicine, University of Toronto, Toronto, ON, Canada

Objectives: In response to recommendations of a university program review panel to improve faculty development programs for health sciences faculty, the library is participating by enhancing information services that support teaching and learning programs for these faculty members. The aim is to develop customized and specially packaged resources to meet faculty continuing education needs and make these resources readily accessible online.

Methods: Four information resources were created: (1) Faculty development literature database containing books, journal articles, reports and websites on a wide range of teaching and learning subject matter derived from a variety of databases and other sources. (2) Preconstructed, expert searches of most frequently searched education topics, such as giving feedback, small group teaching, and clinical supervision. Each topic links to a live, current search in PubMed. (3) Teaching and Learning Research Guide to resources in health sciences education, including: e-books, major journal titles, most useful databases, key articles, repositories for multimedia teaching resources, discussion forums, video clips, blogs, and websites. (4) Article alerting service: Newly published articles are emailed on a monthly basis, enabling faculty to keep up to date on the latest teaching and learning literature. Faculty can select from a list of existing alerts or request a new, customized search.

Results: Prior to the program review, none of these resources existed. Now faculty and graduate students can quickly access teaching and learning literature using the faculty development database. An additional RefShare version provides the university community with access to the full text of the library's licensed e-journals Faculty save time and receive quality information by using the "expert" searches of most frequently searched topics and the research guide provides selected resources. They can conveniently keep up to date in their area of interest by receiving the latest articles via email.

Conclusion: These specialized information services require systematic updating and ongoing development. There are plans to add expert searches of common education topics in the ERIC database. The university's program directors have recognized the contribution of these services to faculty development and actively promote their use. Ongoing funding is provided to support the dedicated time of an information professional, required in carrying out this work.

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PharmGuide: Your Home Base for Free Online Drug Information

Amy Chatfield, Information Services Librarian, Norris Medical Library, University of Southern California–Los Angeles; **Trish Chatterley,** Public Services Librarian, John W. Scott Health Sciences Library, University of Alberta–Edmonton, Canada; **Jean L. Siebert, AHIP,** Collection Manager and Reference Librarian, Health Sciences Library, West Virginia University–Morgantown; **Jonathan B. Koffel,** Clinical Information Librarian, Bio-Medical Library, University of Minnesota–Minneapolis

Objectives: There are so many drug information websites in existence that it can be difficult to know which are the most reliable and reputable. The need for a guide to high-quality, freely available online drug information was identified by members of the Pharmacy and Drug Information Section of MLA, and a small working group was formed to create PharmGuide (www.goo.gl/f14Me).

Methods: The working group members live across the United States and in Canada, so work of identifying, summarizing, and tagging websites was conducted using free online web tools. Google Docs was used during the planning phase of the project to outline work processes and begin the identification and review of relevant resources for inclusion. A list of tags for use in categorizing websites was derived from the American Association of Colleges of Pharmacy's Basic Resources for Pharmacy Education. A Zotero group library was created for data entry and review. Entries were added by one group member and then peer reviewed by another to ensure their thoroughness and accuracy. The content was then migrated to PBWorks wiki software, and the guide now resides on the PharmLib Wiki. The guide is updated continually and is accessible to all.

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Playing the Field: Using CampusGuides Statistics and Google Analytics to Assess a Intranet Site Redesign

Melissa Rethlefsen, AHIP, Education Technology Librarian; **Ann Farrell,** Librarian; Mayo Clinic Libraries, Mayo Clinic, Rochester, MN

Objectives: To use a combination of Google Analytics' and CampusGuides' built-in analytics to explore usage patterns of an internal CampusGuides implementation. To use analytics findings to improve CampusGuides content and design.

Methods: In 2011, the library converted a large portion of its intranet site to an Internet protocol (IP)-restricted CampusGuides site. As part of the transition, the CampusGuides implementation team opted to use Google Analytics in tandem with CampusGuides' built-in statistics to investigate usage patterns, particularly focusing on referring sources, search keywords, and navigation paths throughout the site. Google Analytics' beta tool, In-Page Analytics, was used extensively to examine how heavily accessed pages were utilized and navigated. Bounce rates and time on page factors also helped library staff find places where information was lacking and where gaps might be filled. Content and design were improved based on findings.

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Ranking Library Tasks for Redesigning a Medical Academic Health Center and University Mobile Website

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Objectives: (1) To determine what library-related tasks users most want to be able to perform on their mobile devices (smartphones, iPads, etc.), using a modified Likert scale, free text, and multiple choice questions to rank the most common tasks. (2) To redesign our existing library mobile site.

Methods: Used SurveyMonkey to design a 4-question survey to gather responses from medical academic health center and university community over a 3-week period. Approximately 300 responses were received. Responding population included: first-year medical, nursing, physical therapy, occupational therapy, and pharmacy students, among others. Questions addressed whether users own mobile devices, which model(s) they own, most desirable library services for mobile use, and the likelihood of their own use of mobile services.

Results: Do you own a smartphone, tablet computer, or other Internet-capable mobile devices (e.g., Android, iPad, iPod)? Yes: 246 (86.3%), No: 39 (13.7%). Results will detail breakdown of platforms owned including freehand comments from students.

Conclusions:

• A majority of students surveyed (86.3%) own mobile devices.
• Students expressed interest in accessing library portal on mobile devices (74.7%).
• A majority of students (92.3%) had not used existing mobile library portal, mJEFFLINE.
• Quick look up items or service transactions (look up hours and policies 95.5% and contact staff for help 85.5%) are tasks that ranked highly and are suitable for small screens.
• Surprisingly, majority of responders also ranked full-text reading (82.5%) as somewhat important to very important and almost as many were interested in article searching (77%).
• Answers from the survey will guide the mobile site redesign to highlight user priorities, including: hours, policies, study room and equipment reservations, and application recommendations.

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Reliability Markers: How Caregivers Assess Online Health Information

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Objectives: This study will examine informal caregivers' perceptions of the reliability of older adult health information retrieved through online platforms. As health information is increasingly sought through an online platform and as the ratio of older adults increases globally, a greater understanding of the information needs of these lay information mediaries is essential to inform evidence-based library and information science practices.

Methods: A sample of Canadian informal caregivers possessing previous experience using online platforms to access older adult health information will be studied. Five informal caregivers responded to advertisements posted on online caregiver communities and agreed to semi-structured telephone interviews. The overall intention and focus of the study on informal caregivers' perceptions call for a phenomenological methodology. In line with phenomenological approaches, transcriptions were analyzed using constant comparison method, which allowed for the identification of emerging patterns and themes.

Results: Informal caregivers' searches are internally motivated, are self-initiated, and occur only in the presence of a catalyst, often a change in the older adult's health. Caregivers use personal and professional experiences to shape and guide their searching processes and choose to store information found, not sharing it with the older adult. Most reliability markers were found to either explicitly increase or decrease caregivers' trust in the found information, whereas a few markers were generally found to have little to no effect on the caregivers' perceptions of trust. Overwhelmingly, caregivers were found to make active, internal reliability evaluations. In assessing a website's reliability, caregivers compared information found to information on other sites and to information already known. This active filtration of reliability markers was based on past experiences and perceptions (both professional and personal) and often evolved into a habitual process.

Conclusions: Reliability assessments of online health information are complex and have many qualities that vary depending on the caregivers' past experiences. Future studies could replicate the current study with a larger sample size and with a sample of older adults with varying degrees of cognitive capabilities. Findings from this study carry implications for the library community. Librarians must be aware of informal caregivers as hidden patients, recognizing that their information behaviours, including reliability assessments, are composites of past experiences and may not follow a linear search trajectory.

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Scouting out a Mobile Line-up: An Analysis of Mobile Website and Resource Use Patterns

Heather L. Brown, Head, Access Services; **Ann Kaste,** Digital Resources Librarian; McGoogan Library of Medicine, University of Nebraska Medical Center–Omaha

Objective: Students and health care professionals are keeping pace with the increased use of mobile devices, resources, and applications. The results of this research will show how academic health sciences library patrons utilize the library's mobile website and resource applications and provide baseline data that can be used for future mobile resource acquisition.

Methods: In this research, the library's 2011 mobile website usage statistics will be extracted from the university's web analytics software. Usage data from library-subscribed mobile resources will also be obtained from publishers and vendors. A brief survey will then be made available to users of the library mobile website. The respondents will be asked how often and where they utilize these resources (e.g., in class, studying, clinical rotations). The website and resource usage statistics will then be analyzed in conjunction with the survey data.

Results: Web usage statistics reveal that while the main mobile site has been accessed approximately 1,500 times, usage of the subordinate pages is relatively low. Of these pages, mobile resource and app information were used the most, followed by a study room availability link, library hours, and contact information. Time of use was predictably higher during the day, but a notable spike occurred during the evening hours. Usage of individual resources cannot be fully reported due to the lack of vendor supplied mobile usage reporting, though available data indicate that downloadable app usage exceeds mobile web usage. For the student survey, 164 of 194 responses were accepted. Fifty-six percent of respondents used the site on a daily or weekly basis. Medical students are the mobile site's power users, reporting the most site usage on a daily or weekly basis. Overall, respondents overwhelmingly used the mobile site while studying (81%), followed by in class (40%) and on clinical rotations (28%). Of the clinical rotation usage, medical students used the mobile site and its resources the most (50%).

Conclusions: Though some sections of the mobile website are not heavily used, there is significant traffic to the mobile resource and apps pages. However, vendor reporting of these resources is not consistent. Requests need to be made to vendors to provide usage statistics on mobile interfaces and apps in order for the library to accurately report the outcomes of its mobile efforts. Future purchasing and marketing of mobile technologies needs to be influenced by student survey results that show usage is heaviest for study, rather than clinical, purposes.

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Show Us Your Heart! A Statewide Library Initiative to Increase Organ Donation Registration

Kate Saylor, Outreach Librarian; **Jean Song,** Research and Informatics Coordinator; **Carol Shannon,** Liaison and Information Services Librarian; Taubman Health Sciences Library, University of Michigan–Ann Arbor

Objectives: In an effort spearheaded by the University of Michigan Taubman Health Sciences Library, libraries on several university campuses across the state of Michigan participated in the 2011 "Michigan Libraries for Life" organ donor registration drive on September 19–20, 2011. This poster will discuss program details and information about this successful collaboration between the state' designated organ and tissue recovery program and participating academic libraries.

Methods: Partnering with the state' designated organ and tissue recovery program, "Michigan Libraries for Life," was expanded from a 2010 "MLibrary for Life" drive, which registered 223 new organ donors at 5 libraries on the Ann Arbor and Flint campuses and provided general organ donor and registration information to hundreds more. The 2011 program grew to include 10 libraries across the state and registered a total 414 visitors as organ donors! This poster will discuss the development of this initiative, coordination of several participating library partners, and future plans to expand the effort across the state.

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Stepping up to the Plate: Experiences as First-Time Instructors of a Library Research in Context Class

Amy Blevins, Clinical Education Librarian; **W. Shane Wallace,** Emerging Technologies Librarian; Hardin Library for the Health Sciences, University of Iowa–Iowa City

Objectives: In the spring of 2011, a call went out asking for librarians who would be interested in teaching an undergraduate one-hour credit course in information literacy. Two health sciences librarians volunteered to teach a course with an emphasis on the health sciences that would be offered completely online through a Desire2Learn course management system.

Methods: The course was designed to address information literacy concepts as stated in the course description: formulating a research question, interpreting citations, understanding the research process, identifying appropriate literature formats, creating search strategies, evaluating information, and using information ethically. It was divided into nine modules lasting approximately two weeks each with the two course instructors working to create a logical progression of information literacy skills. Since the course was completely online, care was taken to develop materials that included active learning elements such as lectures with self-assessments and required discussion board posting. The course consisted of assignments for each module, pre- and post-tests to assess learning, as well as a final project designed to incorporate all the steps of the research process. Finally, the course design required a measure of adaptability to address unforeseeable complications.

Results/Conclusion: The course was completed successfully. Overall student feedback was positive, and the instructors observed improved student skills with regards to information literacy. As new instructors, we learned that students are not always vocal about problems with course management systems and that instructor expectations may have been too high regarding student participation in the feedback cycle. Other challenges revolved around compliance with course guidelines (e.g., late assignments and due dates) and development of clearly defined expectations for assignments and participation. The experience was satisfying for the instructors, and both plan to teach the course again. Results from a course satisfaction survey indicated that a majority of the students learned a lot. Internal review board approval is pending for other course results.

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Supporting Patient and Family Focused Care With a Laptop Lending Program

Holly Sheldon Kimborowicz, AHIP, Health Science Librarian, Resource Center; **Cathy Murch, AHIP,** Bioinformatician/Systems Librarian, Library; Lake Health, Concord Township, OH
Objectives: To evaluate a pilot project to implement a laptop lending program in a community hospital system, supporting patient- and family-focused care.
Methods: The resource center, staffed by 1.5 librarians, serves over 3,000 staff and 600 physicians, students, patients, families, and community residents with 2 acute care community hospitals with a combined total of 374 beds. The resource center will implement a pilot project for a wireless laptop lending program for inpatients and their families for use in one of the 2 hospitals. The purpose of the program is to help our patients and families stay in touch with family and friends by email, Facebook, Skype, etc.; keep up with work or school; watch DVDs or listen to CDs or play games; or search the Internet for good health information. The pilot project will be evaluated with questionnaires completed by each client who borrows a laptop. Nursing staff will be asked for feedback. If the pilot project is successful, the program will be expanded.
Results and Conclusions: The laptop lending pilot project was launched at one of the two Lake Health hospitals, West Medical Center, on September 12, 2011. The pilot project was approved by the library committee, a medical staff committee, and funded by the resource center/library's endowment fund. The library team worked with the nursing supervisors to implement the project. Multidisciplinary collaboration is necessary to implement this project. Promoting this service to the nursing staff, other hospital and medical staff, and our patients and their families is an ongoing challenge and key to the success of the program. Numerous challenges have been encountered and resolved during the pilot project. The service is being utilized by patients and families. Use of the program began slowly but is steadily growing. The library team is obtaining feedback from various departments to identify ways to promote this service. They are working with the nursing supervisors to simplify the process to borrow and return the laptops. The library committee discussed the pilot project on December 7, 2011. Based on the results, the library committee agreed to expand this service to the second hospital, TriPoint Medical Center, in 2012. The library team looks forward to growing this patient- and family-centered service for Lake Health.

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Teaming up with Girl Scouts for Nutrition: Making Reliable Electronic Health Information Accessible to the Girl Scouts of Louisiana-Pines to the Gulf

Kimberly A. Pullen, Head, Liaison Section Program; **Betty Tucker,** Head, Collection Management; Medical Library, Louisiana State University Health Sciences Center–Shreveport
Objectives: The goal of this project was to assist the Girl Scouts with implementing a nutrition series by providing computers and educational sessions on locating reliable online health information resources. This poster will describe the nutrition series, explain the need for information outreach to this population, and describe how library faculty partnered with Girl Scout leadership to complete the project.
Methods: Library faculty conducted educational outreach activities for Girl Scout leadership, training staff and volunteers how to find trustworthy online health information resources such as healthelinks, MedlinePlus, and the National Library of Medicine databases. The library purchased two laptop computers with funding from the Technology Improvement Project Award. These computers are used by the Girl Scout leaders to instruct the Girl Scouts participating in the nutrition series. As part of this four-week series, the Girl Scouts learn to use reliable online health information resources to explore how to eat and plan and prepare healthy foods based on the "healthy plate" concept. Handouts, pedometers, journals, and other promotional materials are distributed to the participants. The girls may also earn badges and awards for healthy living skills by putting the knowledge gained into practice.

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The Application of Evidence-Based Medicine by Medical Students

Chang Hui-Chin, Director, Library, School of Public Health, Chung Shan Medical University Hospital, Taichung, Taiwan; **Chiu Tzu-Heng,** Associate Director, Library, Taipei Medical University, Taipei, Taiwan; **Wu Chih-Lung,** Professor, School of Medicine; **Tsai Chung-Hang,** Professor, Department of Pathology; **Lin Fang-Yu,** Professor, Evidence-based Medicine Center; **Lin Long-Yau,** Professor, Department of Obstetrics and Gynecology; Chung Shan Medical University, Taichung, Taiwan
Objectives: It is a consensus that evidence-based medicine (EBM) should be accommodated in the pre-internship curriculum. However, the educational value of EBM is still debatable. Most studies address this issue unidirectionally, without considering the potential interplay among practitioners' or students' perceptions and attitudes toward EBM.
Methods: Questionnaire-based investigation on a group of 5th- and 6th-year medical students (7 years medical education system) enrolled at a medical college in Taichung that offer EBM specific training courses. The design of questionnaire was based on the evaluation tool developed by Johnston et al. The evaluation tool consists of 4 categories. The domain to total reliabilities is 0.926, 0.847, 0.892, and 0.913, respectively. We distributed 50 evaluation questionnaires in total, and 50 returned (100% response rate). The analysis was performed on SPSS for Windows 12.0 package for reliability, Spearman correlation and simple regression, and on Amos 7.0 for structural equation modeling.
Results: The overall data indicates the students are with positive understanding of EBM; the average score is 4.77–0.45(5 for fully agree, 1 for not agree). In the category of personal perception of EBM applicability, the average score is 2.90–1.22(5 for fully agree, 1 for not agree). The searching frequency of EBM is the highest for every other day and every 2 days (about 30% each). The Internet is the most utilized information, followed by textbooks and secondary database(20%, 16%, 12%). The overall attitude toward EBM's future applicability and prospects is positive as well, with an average score of 4.67–1.09(5 for fully agree, 1 for not agree). On the other hand, the average score for questions that negate EBM is only 2.32–0.95(5 for fully agree, 1 for not agree), suggesting that the students are generally favorable for EBM. In addition, the comparison of different categories shows that basic understanding of EBM is also positively correlated with the awareness of EBM's future prospects/applicability($r=0.36$, $PPP<0.05$).
Conclusions: Based on the structural equation model, we could clearly understand whether and to what extent EBM training in-

fluences medical students in terms of their motivation and desire to employ EBM in their future practices. As for the evaluation of how EBM training has impacted on application, we need to understand and trace the history of how academic resources/libraries are used by the students in order to have a summarized idea of EBM training's efficacy. In the future, we should also include the factors of patients and behavioral changes in the evaluation to interaction of medical students' clinical performance and EBM and thereby improve the EBM curriculum accordingly.

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The Core Public Health Journal Project: A Game Change in the 3rd Inning

Marie T. Ascher, AHIP, Associate Director, User Services, Health Sciences Library, New York Medical College–Valhalla, NY; **Ann Madhaven,** Public Health Librarian, Assessment, Policy Development, and Evaluation, Public Health, Seattle and King County, Seattle, WA; **Melissa Rethlefsen, AHIP,** Education Technology Librarian, Mayo Clinic Libraries, Mayo Clinic, Rochester, MN; **Debra Revere,** Research Scientist/Clinical Faculty, Department of Health Services, School of Public Health, University of Washington–Seattle; **Matthew Wilcox,** Public Health Librarian and Director, Academic Technology, School of Public Health, Yale University, New Haven, CT

Objectives: The Core Public Health Journal Project has been an activity of the Public Health/Health Administration Section of the MLA (PH/HA) since 2000. This poster presents the release of the long-awaited version 3 lists and describes a new process for more rapid review and dissemination of lists: the philosophy of perpetual beta.

Methods: After MLA '11, the project's Oversight Committee agreed upon a "Game Change" to make the project more sustainable, fluid, and timely. Details of the new process include: (1) staggering new list roll outs every two months, (2) retasking committee members with liaison responsibility for lists and the numerous volunteers who provide subject compiling and reviewing, and (3) detailing a realistic release schedule. To support this process, the committee is utilizing tools such as a Google Docs spreadsheet to collaborate and post lists to the web and maintaining a communications structure that includes committee liaisons securing ongoing commitment from subject compilers and reviewers and recruiting new participants on an ongoing and as needed basis.

Results: The biostatistics, epidemiology, and behavioral health/health education lists were released in fall 2011 and can be found on the PH/HA website at www.phha.mlanet.org/blog/activities/core-public-health-journal-project/. The lists are being compiled with the assistance of the original version 3 subject teams where possible. List users can post comments on lists through a web feedback form. We will report on list roll-outs and preliminary results of user feedback in the final poster.

Conclusions: Implementing a philosophy of perpetual beta, rather than holding lists until a full release cycle is complete, enables regular review of lists and the posting of timely updates.

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The iPad: A Game-Changer for Accessing Library e-Resources

Nadine Dexter, AHIP, Director, Medical Informatics, and Director; **Shalu Gillum,** Public Services Librarian; **Michael Garner,** Medical Informatics Librarian; **Deedra J. Walton, AHIP,** Electronic Resources Librarian; Harriet F. Ginsburg Health Sciences Library, College of Medicine, University of Central Florida–Orlando

Objectives: To determine whether library patrons will access the Harriet F. Ginsburg Health Sciences Library e-resources more frequently when provided with an instant-on tablet device, in this case the Apple iPad.

Methods: Full-time teaching faculty and first-, second-, and third-year medical students at the University of Central Florida College of Medicine were surveyed using web-based individual surveys regarding their use of Health Sciences Library e-resources on the Apple iPad. All medical students and full-time faculty have been provided with an Apple iPad. The library is 98% virtual, with a goal of being 100% virtual in the next 5 years. Google Analytics and Sawmill (a universal log analysis reporting tool) will be used to determine how users access the Health Sciences Library website and to track usage of e-textbooks for first-, second-, and third-year medical students both pre- and post-iPad deployment.

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The Perspective of a Taiwan Journal Publisher: Disseminating Domestic Research Output Globally

Dar-Maw Wen, Executive Supervisor; **Peggy Liu,** Chief Director; **Anne Chen,** Executive Director; International Federation for Information Integration, Taipei, Taiwan

Objectives: Ever since the mid-1970s, institutions and societies have shared the common belief of scholarly communications to disseminate and preserve valuable research output. For individual author, one's findings and intellectual priority can be preserved through submitting papers to scholarly journals. Then for Taiwan journal publishers, to enhance publications becomes necessary to optimize the value of the scholarly communication channel. This study is to present the various international assets that are available for Taiwan medical journal publishers to disseminate valuable research content globally.

Methods: With an increasing amount of global subscribers to international MEDLINE databases, Taiwan medical journal publishers are able to glimpse the global trend through applied bibliometrics and analysis on search results from worldwide platforms such as Ovid MEDLINE. The development of global research and significant authors then can be identified to help market positioning for effectively reaching the tier of core journals. Journals that published for relatively long could still enhance its accessibility through linking out to those search platforms. Searching with unified Medical Subject Headings (MeSH) terms, domestic journal full text is available to global researchers. Taiwan societies nowadays even have the chance to choose copublishing with international publishers, such as Lippincott Williams & Wilkins, to learn international experience and improve overall quality. With editorial team support on intensive proofreading, Taiwan research content is improving to Science Citation Index (SCI) levels. International article submissions increased and leads to a growing impact in world.

Results: The data and information provided through the Ovid platform were performed in various aspects. A newly published journal like the *Journal of Traditional and Complementary Medicine (JTCM),* first issued in October 2011, has the ability to position in early stages and setting editorial policy through

analyzing the articles published from 1990 to 2010 of Chinese medicine-related subjects. Most related topics like medicine, Chinese traditional drugs, Chinese herbal, and acupuncture therapy are found. Results show that study of Chinese herbal has a higher interest, where total of 20,097 articles were published, while Chinese traditional medicine has 3,543 articles and acupuncture therapy of 2,753 articles. Within the subjects, the most productive authorship was able to be identified as MacPherson H., with 51 articles published in the time period of testing data. Understanding the trend of leading hot topics and sending invitations for article submissions to the most valuable professions helps *JTCM* with a solid branding plan. Journals that published for long also have chance to rebrand through those new services and additional values provided by international platforms. Taking *Chang Gung Medical Journal* as a sample, where Linkout services was provided since 2009, the hits amount is clearly increasing from 29,098 hits in second quarter of 2010 to 31,434 hits in first quarter of 2011. The *Journal of Nursing Research* that copublishes with international publishers and authorizes access on Ovid platform had improved its effectiveness from 11,043 full text requested in 2010 to 15,197 requested in 2011. The accessibility and availability to the global researchers effectively increased the journal's visibility in world.
Conclusions: From the perspective of a Taiwan journal publisher, using an international platform is not merely for the reference contents it compiled. Its availability, openness, and flexibility help to analyze the subject heading/discipline further leading to a best positioning and marketing plan. The studied *JTCM* was able to form clear aims and scope based on the analysis on extracted data. This study is to show how figuring trend topics with leading authors or reviewers through search categories and MEDLINE's tree structure helps local journal publishers for benchmark. A further suggested research is to identify core journals following the proof from Bradford's Law. Following the successful editorial policy and experience of the tier 1 core journal, it can be approached that young journals like *JTCM* would able to improve from tier 3 journal to tier 2 journal by getting SCI approval in 3 years. Then further approach the worldwide penetration through other services to become tier 1 core journal within 5 years.

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The Use of Wordle in an Academic Health Sciences Library
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Objectives: This project will explore the use of word clouds in an academic health sciences library. The authors employed the word cloud generator, Wordle, to enhance instruction and inform collection development decisions and as a marketing tool.
Methods: Word clouds can be seen all over the Internet. They are common on blogs and news sights. The authors of this project will present a case study on the creative use of word clouds in an academic health sciences library. A few examples of word cloud usage include: creating word clouds as visual representation of researchers' work at the university and using the visual representation of research to inform collection development decisions. The word clouds were also used to assess and enhance library instruction. Lastly, word clouds were used as a marketing tool to reach out to faculty and students.

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Use of Patron Input and Student Collaboration in Library Space Planning
Hannah F. Norton, AHIP, Reference and Liaison Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Linda Butson, AHIP,** Consumer Health and Community Outreach Librarian, Biomedical and Health Information Services, Health Science Center Libraries; **Michele Tennant, AHIP,** Assistant Director, Biomedical and Health Information Services, and Bioinformatics Librarian, Health Science Center Libraries and UF Genetics Institute; **Cecilia E. Botero,** Associate Dean, George A. Smathers Libraries, and Director, Health Science Center Libraries; University of Florida–Gainesville
Objectives: To ensure worthwhile investments of time and money during library remodeling or renovations, libraries must have ample patron input regarding space needs and preferences. In these difficult budgetary times, libraries must use creative means to move projects forward. This poster describes how the library profited from user input and student collaboration during renovation planning.
Methods: Building on results from a previous survey of students, faculty, and staff about their needs in an ideal library space, librarians conducted focus group sessions throughout 2011 to gather more in-depth feedback from patrons. Comments were grouped into thirteen categories, covering everything from individual and group study spaces to computers and technology to furniture. In addition to asking patrons about their ideal learning environment and preferred changes to our existing space, facilitators solicited input on specific suggestions generated from visits to exemplary health sciences libraries. While funding has been designated for public space renovation, that is not the case for staff space. Using a unique approach, the library has partnered with a team of design students to plan staff space renovation.
Results: Focus groups yielded valuable input about patrons' wants and needs in the library space that have helped inform space planning conversations with designers and, ultimately, decision making about renovations. Focus group participants most frequently addressed the library's computers and technology, desired changes in furniture, study and meeting rooms, and issues of the library's ambience and general level of comfort. Collaboration with design students on staff space renovation has also proved fruitful, yielding interesting design ideas for the library to consider as we seek additional funding to renovate those spaces.
Conclusion: Renovating or remodeling a library incurs significant costs and is thus particularly challenging in times of financial difficulty. Obtaining input from library space users throughout the renovation process can help ensure that the outcomes of renovation are worth the costs. Our library found it particularly beneficial to obtain such input before engaging designers or architects in the planning process in order to bring a clear vision to the table. Libraries should be open to creative strategies in the space planning process, including collaborating with design students in early stages of planning.

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Using Google Analytics to Evaluate an Email Information Literacy Program for Medical and Dental Students

Natalie Clairoux, Biomedical Librarian, Bibliotheque de la sante, Universite de Montreal, Montreal, PQ, Canada

Objectives: An email information literacy program has been in place for over a decade at Université de Montréal's Health Library. Students periodically receive messages highlighting the content of relevant guides on the library's website. We wish to evaluate, using Google Analytics (GA), the effects of the program on specific web page statistics. Using the data collected, we may pinpoint popular guides as well as others needing improvement.

Methods: In the program, first- and second-year medical (MD) or dental (DMD) students receive eight bimonthly email messages. The DMD mailing list also includes graduate students and professors. Enrollment in the program is optional for MDs but mandatory for DMDs. GA profiles have been configured for the libraries websites in order to collect visitor statistics since June 2009. The GA Links Builder was used to design unique links specifically associated with the originating emails. This approach allowed us to gather information on guide usage, such as the visitor's program of study, duration of page viewing, and number of pages viewed per visit, as well as browsing data. We also followed the evolution of clicks on GA unique links over time, as we believe that users may keep the library's emails and refer to them to access specific information.

Results: The proportion of students who actually clicked the email links was, on average, less than 5%. MD and DMD students behaved differently regarding guide views, number of pages visited, and length of time on the site. The CINAHL guide was the most visited for DMD students, whereas MD students consulted the pharmaceutical information guide most often. We noted that some students visited referred guides several weeks after receiving messages, thus keeping them for future reference; browsing to additional pages on the library website was also frequent.

Conclusion: The mitigated success of the program prompted us to directly survey students on the format, frequency, and usefulness of messages. The information gathered from GA links as well as from the survey will allow us to redesign our web content and modify our email information literacy program so that messages are more attractive, timely, and useful for students.

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Using the ADDIE Model in Designing Bibliographic Instruction

Colleen Cuddy, AHIP, Director; **Sarah Reinbold,** Instructional Design Librarian; Weill Cornell Medical Library, Weill Cornell Medical College, New York, NY

Objectives: To demonstrate the use of the ADDIE model (an instructional design model) in designing bibliographic instruction.

Methods: This poster reviews the redesign of a library workshop based on the ADDIE model of instructional design. The ADDIE model is a systematic approach to creating effective and efficient instruction based on an in-depth analysis of goals and objectives. The model emphasizes a task-based rather than knowledge-based approach to learning. By deliberately focusing on the desired performance outcome of learning, courses can be streamlined and structured in a way that is relevant to the learners, meets their needs, and facilitates active learning. This poster demonstrates the evolution of a library workshop, from pre-ADDIE format to post-ADDIE format. The ADDIE model incorporates five phases: analysis, design, development, implementation, and evaluation. Each phase was conducted sequentially with evaluation taking place during every step. The poster gives a practical guide to implementing ADDIE in bibliographic instruction development.

Results: Implementation of the ADDIE model resulted in a workshop that was more interactive, had multiple methods of delivery (including lecture, small group activities, online learning, and self-paced discovery), and measurable learning objectives. A number of steps throughout ADDIE helped us accomplish this, including the determination of objectives mapped to student tasks, performance aids, and performance tests. The ADDIE model moved instruction away from the pattern of teacher-centered knowledge dump toward a student-centered interactive learning process. The ADDIE process is both cyclical and nonlinear: evaluation took place during every phase. In addition, once the final phase was completed, analysis began again (based on evaluation results). As a result, the workshop was more organized, cohesive, and learner centered than the previous format.

Conclusion: The ADDIE model is an iterative process that librarians can utilize in their bibliographic instruction development to create focused, learner-centered instruction that measurably meets both the librarian and the student learning goals and objectives.

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Visual MEDLINE: A Google-like Clustering Biomedical Literature Retrieval System

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Objectives: The searching results of PubMed are in descending order of the published date. However, when users deal with large quantity of search results, topics sorting can be crucial in selecting precise results. In order to let users to search data from PubMed in an intuitive approach, the researchers design a Google-like clustering biomedical literature retrieval system, called Visual MEDLINE.

Methods: From November 2010, the research team adopts text mining and automatic clustering technology to retrieve bibliography, abstracts and Medical Subject Headings from the PubMed database, so that the searching results can automatically be categorized and visually displayed in a redial knowledge ontology structure. In addition, tag cloud and literature filtering are two distinguished features of this system. The research team conducts two stages of user tests with forty-three college students majoring in health sciences-related subjects and fifteen clinical staff, respectively, to collect users' medical information retrieval behavior, as well as their thoughts and suggestions regarding Visual MEDLINE.

Results : In May of 2011, the user tests of college students were conducted. The results were as follows: students gave positive feedbacks regarding knowledge ontology and tag cloud. While applying same inquiry on PubMed and Visual MEDLINE, the precision ratio of each is 60% versus 66%, respectively. The researcher also analyzed the searching patterns of these students. In September to October of 2011, the user tests of clinical staff were carried out. The results were as follows: While applying same inquiry on PubMed and Visual MEDLINE, the precision ratio of

each is 45.9% versus 64.1%, respectively. The overall satisfaction with Visual MEDLINE is 3.73 out of 5. 86.67% of the participants would like to recommend this system to others, and 66.67% of them would like to continue on using Visual MEDLINE in the future. Also, the searching patterns were collected and analyzed.
Conclusions: Visual MEDLINE was sponsored by the National Science Council of Taiwan and the cooperative company Fly-Sheet Information Service. The research team expects to develop an intuitive, visualized, and popularized biomedical literature automatic clustering retrieval system. User feedback collected through the developing process was used for system revision. This projected was closed in October 2011. Currently, Visual MEDLINE is available under Taipei Medical University library website (visualmedline.tmu.edu.tw). The researchers hope more feedbacks can be collected from the public.

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Runs, Strike-outs, and New Game Strategy: Assessing Health Association Library Patron Needs

Marian G. Taliaferro, AHIP, Director, Reference Center and Archives, Association of American Medical Colleges, Washington, DC

Objectives: To determine patron opinions regarding library and archives provision of new resources, training, and services; to determine those services and resources they value most highly; and to ascertain service areas in need of improvement or discontinuation.
Methods: Librarians created and issued an online patron survey with questions to gauge interest in different or expanded offerings and possibilities regarding input on patron needs and preferences. Survey content included areas such as collection development, satisfaction with service, services most highly valued, web content most frequently consulted, and areas for development of new resources.

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What's the Librarian Got to Do with It? Partnering with Residents for Evidence-Based Practice

Colleen M. Kenefick, AHIP, Director, Center for Healthcare Informatics Education; **Susan E. Werner, AHIP,** Medical Librarian; Health Sciences Library, Stony Brook University, Stony Brook, NY

Objectives: Recent research suggests that teaching residents the principles of evidence-based practice in a clinically integrated and longitudinal approach may improve their lifelong usage of these techniques. Collaborating closely with pediatric faculty in developing the three-year curriculum, librarians are actively involved by teaching evidence-based resource hierarchies, effective searching strategies, and evaluating the literature for critically appraised topics.
Methods: The growing importance of evidence-based practice has created a greater demand for librarians to work directly with health care providers in their clinical settings. A three-year evidence-based practice residency curriculum was developed by the pediatrics faculty in cooperation with the librarian. A case-based small group interactive patient/problem, intervention, comparison, outcome (PICO) class is taught for the basics of clinical question formation. As an assignment, additional clinical scenarios for PICO questions are then evaluated. Using previously discussed cases, a searching class is taught by the librarian using various resources including PubMed. Residents are given timed practice cases, and assignments graded according to a predetermined checklist. In the second year, librarians team with individual pediatric residents to complete a clinically relevant critically appraised topic (CAT) for presentation. A LibGuide was created for this program that is continually updated with new evidence-based approaches to content.
Results and Conclusions: For the first time, pediatric residents are presenting critically appraised topics in clinically relevant areas to their colleagues. As the resident culture and expectations change, this academic department and library partnership is expected to become the norm for the future. Evaluation to measure the curriculum's success will continue to be done in a systematic manner.

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Data Collection's Role in Addressing Health Disparities: Playing Small Ball

Patricia J. Devine, Network Outreach Coordinator, National Network of Libraries of Medicine, Pacific Northwest Region, University of Washington–Seattle; **Jim Anderson,** Physician Assistant, Medical Library, Seattle Children's Hospital, Seattle, WA

Objectives: Collection of information about clinician attitudes regarding health disparities and the measurement of the disparities has the potential to impact inequality. Librarians' emerging roles in data collection and management make them valued team members in this effort. We will demonstrate the power of data as a tool and offer models of data collection that can be easily integrated into routine clinical settings.
Methods: Practicing clinicians will be administered a short survey about attitudes regarding health disparities and data collection, which will raise awareness and identify respondents who want more resources. Recommended techniques for gathering relevant data will be compiled and made available to clinicians who want to use the tools to collect data in their practices and patient population. This will include modest methods appropriate in almost any clinical setting. Paying attention to even small data sets has been shown to impact disparities in care. This "small ball" approach (doing what you have time to do with existing resources) offers a vision of data collection usable by those previously convinced that their clinical demands precluded data collection efforts.

Poster Session 3

Tuesday, May 22, 1:00 p.m.–2:00 p.m.

WSCC, 4A/B, Level Four

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If You Build It, Will They Come? One Library's Evaluation of Its Social Networking Outreach

Lee A. Vucovich, AHIP, Assistant Director, Reference Services, and Assistant Professor; **Valerie St. Pierre Gordon, AHIP,** Associate Professor, Head, Cataloging, and Staff Development Officer; **Nicole Mitchell, AHIP,** Reference Librarian and Liaison, School of Optometry; **Lisa Ennis,** Systems Librarian and Co-Liaison, School of Nursing; Lister Hill Library of the Health Sciences, University of Alabama–Birmingham

Objective: To understand how patrons use the library's social networking sites, including the Facebook page, representative blogs, and YouTube channel, and evaluate their effectiveness in meeting the library's goals to reach users at their point of need and engage them in different ways.

Methods: Lister Hill Library (LHL) supports schools of medicine, dentistry, nursing, optometry, public health, and health professions and the researchers and clinicians affiliated with the institution's medical center. Librarians are using social networking sites as one means of sharing information and connecting with users in these diverse groups. Usage statistics and other metrics compiled in 2011 for the library Facebook page, representative library blogs, and the library YouTube channel were analyzed. The purpose of the tools, the number times each was updated, and the amount of librarian time spent on site maintenance is included.

Results: While the comments features on all sites are largely unused, metrics for 2011 indicate that users are interacting with LHL's social networking outlets. Facebook metrics show that 524 people "liked" the library page through December 31. LHL librarians entered 365 posts during the year and spent an average of 30 minutes per post, including follow up. Total impressions of page posts from the news feed, ticker, or wall generally ranged from 300–400 impressions. Usage statistics for the resource of the month, the school of optometry, and the joint health science departments blogs also showed user engagement. Total views were 2,067, 1,861, and 3,386, respectively, with daily page view averages of 6, 5, and 9. The blogs had 12, 25, and 59 posts for the year, with approximately 45 minutes spent per post. LHL YouTube tutorials were viewed 4,309 times in 2011. X videos were uploaded last year. Viewers watched on the YouTube page 53% of the time, while 28.2% viewed embedded content, primarily on LHL's LibGuides. Librarian time, after producing a video tutorial, was approximately 3 minutes, longer if closed captioning was added after production.

Conclusions: Librarians are using these social networking tools in unanticipated ways, and they are effective in reaching users in the online spaces they inhabit. Facebook has been an effective marketing tool as reflected in a growing number of students and faculty attendance at events posted on Facebook. Links to YouTube tutorials and blog posts have been helpful in multiple virtual reference encounters bringing live demonstrations to users on their personal computers and mobile devices no matter where they are. Librarians feel that the number of users reached using these three tools justifies the time and effort spent maintaining them.

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On Air and Online!: Librarians and Doctors Using a Blog and the Radio to Communicate with Listeners About Health

Barbara Rochen Renner, Library Services Evaluation Specialist and Liaison, Allied Health Sciences; **Robert Ladd,** Instructional and Media Design Specialist; **Karen Crowell,** Clinical Information Specialist; **Lee M. Richardson,** Cataloging and Metadata Coordinator, Resources Management; Health Sciences Library, University of North Carolina–Chapel Hill

Objectives: Health sciences librarians at the University of North Carolina-Chapel Hill (UNC) partner with producers of a weekly health-oriented radio show hosted by clinicians. Librarians helped develop the show's interactive website/blog, provide weekly content links, and continue to help improve website functionality as the show expands in scope. They help the show's staff find and use images appropriately and analyze statistics to understand user behavior on the blog/website.

Methods: The show is hosted by family medicine clinicians in the School of Medicine at UNC, a major southeastern state university, and airs on local AM radio. The university's health sciences librarians provide assistance with the website/blog and supplement radio content with website links to reputable consumer health websites. The show's website was developed as a WordPress.com blog, which interoperates with the show's other social media. Audio podcasts are available via iTunes. Librarians selected MedlinePlus terms for indexing of medical topics and are exploring supplemental indexing for nonmedical health topics. Librarians use WordPress's site statistics to analyze blog/website use. Challenges include communicating with everyone involved, improving blog/website functionality as it and the show expand in scope, helping the show's staff understand and implement appropriate use of images on the website, and scheduling librarian coverage of shows.

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Scholarly Communications Services in an Independent Academic Biomedical Research Center

Ann Marie Clark, Library Director; **Allysha B. Eyler,** Scholarly Communications Librarian; Arnold Digital Library, Fred Hutchinson Cancer Research Center, Seattle, WA

Objectives: Program Objective: The primary objectives of our scholarly communications service are to support our researchers' publishing and grant reporting activities and to increase access to their work. In addition, we provide accurate and timely publication tracking of the work produced at our institution to support grant requirements and communications needs and to provide publishing data and metrics to leadership.

Methods: Program Description: Annually, our program supports 220 faculty, collectively producing 800–1,000 papers, and a graduate program of over 100 students, generating more than 20 dissertations. The below list represents the specific service tracks that we offer our patrons.

• PubMed Central and Open Access Support: We provide support to our authors throughout the entire lifecycle of a publication, from initial submission through deposit in PubMed Central and/or our institutional repository. Services include author rights analysis, repository deposits, publisher deposit troubleshooting, publication number searching, and more.

• Institutional Repository: We host, manage, and have customized our institutional repository to suit our biomedical community.

Librarians seek out, digitize, and curate content to expand access to our researchers' work.
• Publication Tracking: The scholarly communications librarian identifies our researchers' papers on a daily basis. This includes disambiguation, custom metadata assignment, and citation harvesting. As a result, bibliographies, reports, and filters are generated weekly, monthly, and annually for our leadership and community.
• Researcher Profiles Management: The library manages our institution's researcher profile system. This includes selection and configuration of the system, full profile data creation and maintenance services, and tracked publication integration with profile data.

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A Successful Transition from Full- to Self-Service: Table of Contents E-Alerts at a Large Health Cooperative's Medical Library

Ann Glusker, AHIP, Medical Librarian; **Elisa Hoelscher,** Senior Web Developer; **Shamus Ryan,** Library Technician; Medical Library, Group Health Cooperative, Seattle, WA

Objectives: To outline the process of moving the group health medical library's table of contents (TOC) e-alerts service from full- to self-service, including three steps: (1) determining whether the up-front investment would be worthwhile, (2) determining which new system would work best for patrons, and (3) determining which course of action would result in the smoothest transition.

Methods: (1) We gathered statistics about the extent of the service, including ongoing demand, time spent on delivery, and subjective impressions about the importance of branding. (2) We did A3/lean work on the question, asked a local email discussion list of medical librarians about their service, did a literature review, and an Internet scan of library websites. (3) We investigated avenues of self-service alerts, including the journal TOCs site, MDConsult batch sign-ups, GoogleReader, PubMed, and others. 4) Once we determined it would not work to sign up all current alerts patrons, we created tutorials and a full set of instructions for various methods on our Current Awareness web page. (5) Notifications of the transition were sent out by email and appended to alerts.

Results: Alerts were suspended as of November 31, 2011. There was some user feedback; reactions ranged from mild regret to actively engaging the library in assistance with setting up new alerts. There was no strong negative feedback, although we remain prepared for further reaction from patrons in future.

Conclusions: The group health medical library has benefited from the increased capacity available since discontinuing the full-service e-alert service. We trust that the discontinuation has not significantly impacted patrons. The lack of substantial negative feedback could imply that (1) users have not yet noticed the service change; (2) users have adjusted to setting up alerts themselves; (3) users prefer control over their own alerts; or (4) the medical library's process gave adequate warning and support for the transition. In sum, the full-service e-alert program had outgrown the capacity of our three-person staff to maintain it for our large organization. In future, we will use this experience as a caution when investigating service enhancements. We will also consider reinstituting e-alerts in future, with caps on the scope of the program.

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Afghanistan Calling...Stepping up to the Plate to Help Our Deployed Health Care Providers

Mabel A. Trafford, Library Director; **Pamela Scott,** Librarian; Medical Library, Tripler Army Medical Center, Tripler AMC, HI

Objectives: Our health care providers face many challenges when they are deployed, and we want to do what we can to make sure that they have sources to turn to for knowledge-based information .

Methods: The US Department of Defense has been deploying military doctors and nurses to Afghanistan and Iraq since 2001. The physical environment is austere, but these health care providers have additional burdens placed on them. Most come from places where the information they need is at their fingertips any time of the day or night. "In theatre," they face poor, slow, intermittent or nonexistent Internet access, which means they do not have access to their usual sources of information. They also have the same problems with their email access. An additional challenge is that they are often called upon to treat cases outside of the specialty in which they have trained. For example, obstetrics doctors treating dermatology cases and surgeons treating infectious diseases.

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A-mazing Librarians: An Analysis of Workplace Change

Lee Ann Bryant, Reference Librarian, Woodward Library, University of British Columbia–Vancouver, Canada

Objectives: To understand the elements of change in the world of the reference librarian and to compare that with the current and historical experiences of health professionals.

Methods: (1) Semi-structured interviews with librarians, library assistants, nurses, and other health professionals. (2) Content analysis of literature relating to change in the professions. (3) Participant observation.

Results There is significant overlap in the elements of change for the professional groups studied. Both groups share work with paraprofessionals, move from paper to electronic records, experience closure of buildings and institutional reorganization. Both must adapt to new techniques and forget the old. Both groups deal with clients who have new sources of empowerment. Drivers of change for health professionals include not only information technology, but also biotechnology. Health professionals have had "disruptive" change for a longer period of time and have a great deal of experience thinking about innovation. Both groups have a stable set of values.

Conclusions: There are common challenges relating to change in the professions, and we can all take comfort in our common experiences. Listening to the stories of other professions provides inspiration and perspective. Librarians are currently questioning their role: What societal problem do librarians now solve more intensely than other professionals studied? As librarians focus on users rather than buildings or collections, they feel more at home in new roles.

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Strengthening Bioinformatics Research in the Institution: A Powerful Role for Libraries

Meng Li, Bioinformatics Specialist; **Yibu Chen,** Program Coordinator; **William A. Clintworth,** Associate Dean, Health Sciences Libraries, and Director; Norris Medical Library, University of Southern California–Los Angeles

Objective: Our goal was to overcome a fragmented fee-based approach to bioinformatics resources in the university setting. The health sciences library, following its traditional role as a centralized service provider, manages and partially funds an extended collection of commercial bioinformatics databases and analytical tools, making them available to everyone in the university community rather than just a few well-funded labs.
Methods: The Norris Medical Library (NML) initially funded three commercial data analysis tools and later, with additional funding from the provost, expanded the collection to eight resources. The collection—available to all faculty, staff, and students,—covers all major aspects of bioinformatics research needs, from statistical analysis, functional categorization, and prediction to data mining. Additionally, to meet the growing demand for high-throughput sequencing, a genomic profiling approach that generates enormous amounts of data and requires extreme computational power, the NML purchased servers in the university's high-performance computer cluster (HPCC) and implemented licensed as well as open-source analytical tools on the HPCC. Two bioinformatics specialists at the NML developed online scheduling systems and license rotation mechanisms to coordinate the campus-wide access to these resources. They also organize training workshops and offer consultations to educate researchers in accessing and using these resources.
Results: The NML selected eight highly regarded commercial bioinformatics software to meet the most urgent needs of the biomedical research community. With joint funding from the university's vice president of research, we acquired the software and provided institution-wide access. Two bioinformatics specialists manage and provide software training and a task-oriented consultation service. Altogether, the library established a streamlined and highly accessible bioinformatics support service that is well received by the research community. User surveys and usage statistics showed exponential growth in the number of registrants and database usage as well as significantly increased demands in related education and support.
Conclusions: The library is a desirable "neutral" agent for hosting bioinformatics analysis resources. By adding this unconventional collection and providing an efficient bioinformatics support service, the library has established a powerful role in meeting the needs of serving biomedical researchers.

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Voices of the People: Hospital Faculty, Staff, and Students Speak out about the Library

Nancy Calabretta, Assistant Director, University of Medicine and Dentistry New Jersey Camden Campus Library, Cooper University Hospital, Camden, NJ; **Alisha Crawford,** Library Technician, University of Medicine and Dentistry New Jersey Camden Campus Library-Cooper, University of Medicine and Dentistry of New Jersey–Camden; **Barbara J. Miller,** Director, University of Medicine and Dentistry New Jersey Camden Campus Library, Cooper University Hospital, Camden, NJ

Objectives: When our hospital began the process of creating a new medical school in partnership with a local university, library staff sought a creative way to highlight the variety of services currently provided and to show how the library is integrated into daily work throughout the institution. We wanted to present the "story behind the statistics" to showcase the range of library services and to encourage continued support.
Methods: After attending an National Network of Libraries of Medicine, Middle Atlantic Region, Leadership Institute session, "Present with Confidence," a staff librarian proposed a video project wherein a variety of library users would be invited to speak on camera about the library and what it means to them. Participants were solicited in person, via phone, or via email. They were told that their comments might be edited for clarity or brevity, but that their participation would help explain the need for continued institutional support for library staff, resources and services. A library technician served as staff videographer and editor. Accompanied by one of the librarians, she recorded sessions in offices and clinical areas as well as in the library. Administrators, nurses, residents, students, and clinical faculty joined the project with enthusiasm. The resulting videos have become a rich repository of critical incidents and personal experiences that tell the "story" of our library from many points of view.

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There Is an "i" in Our Team: iPad

Amanda Chiplock, Emerging Technologies Librarian; **Kaye Robertson,** Executive Director; **Courtney Mlinar,** Reference Liaison Librarian; **Kristin Kroger,** Reference Liaison Librarian; **Majid Anwar,** Reference Liaison Librarian; **Todd Puccio, AHIP,** Director, Technical Services; Health Professions Division Library, Nova Southeastern University, Davie, FL

Objectives: Redefining the role of the academic medical library: transforming the faculty-library relationship from academic supporter and supplier to facilitator through knowledge management and collaboration between interprofessional groups. Librarian roles change from providing access to information and facilitating scholarly use of information to providing access to iPads and apps and facilitating social learning between scholars regarding medical technology trends and evaluation.
Methods: (1) Transforming traditional librarian skill sets for a successful approach to technology through partnerships and collaboration. (2) Studying medical school iPad pilots and collaborating with other librarians as well as faculty and students to develop an understanding of user needs for information. (3) Facilitating an open group for early adopters of iPad to share their experiences and to setup opportunities for collaboration and social learning. (4) Developing the Nova Southeastern University Health Professions Division (HPD) Library iPad LibGuide, iPad forum, and a mobile web tab on the library's LibGuides providing recommended apps. (5) Creating a new emerging technologies librarian position to research and facilitate iPad usage, app selection, and collaboration between different colleges in the health sciences programs.
Results: By putting an "i" in our team, Nova Southeastern University HPD Library is now the hub of information and communication for all iPad- and app-related information. HPD librarians work directly with faculty, students, and staff to develop and implement projects, iPad training and integration in classrooms, clinics and field work, access to mobile library resources, and app evaluation. Through the library's iPad Initiative Group meetings and circulating iPads to faculty and staff, we successfully fostered iPad projects and initiatives throughout the seven colleges of the HPD. In addition, the iPad initiative has greatly increased library visibility as users have become more aware of the available mobile library resources, as well as the support and services we provide. An added benefit of the increased visibility, not yet fully

analyzed, seems to be that mobile database usage has steadily increased since we began the iPad initiative.
Conclusion: Nova Southeastern University's HPD has an increased awareness of the skills and talents HPD librarians offer, and the new roles we fill in this ever-changing medical information services environment in terms of information delivery, technology and education trends, interprofessional communication and collaboration, training, and evaluation. We will continue to build upon our iPad initiative and hope to inspire more projects and initiatives throughout the university.

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User Preferences for Core Reference Books and Textbooks: Print and/or Digital Format?
Margarite J. McCandless, Clinical Research Librarian, Health Sciences Library, School of Medicine, Virginia Tech Carilion, Carilion Clinic Health System, Roanoke, VA; **Ramona H. Thiss,** Director, Library, Jefferson College of Health Sciences, Roanoke, VA
Objectives: To determine user preferences for print versus electronic format for core reference books and textbooks.
Methods: Setting: Two small health sciences libraries with 2 librarians and 1 technician serving a school of medicine and a 700+-bed teaching hospital. Hospital collection is 90% electronic. Medical school collection is 99% electronic. Population: 84 medical school students; 405 faculty. Hypothesis: The number of users who prefer print format justifies purchasing both print and electronic formats for core reference books and textbooks. Online Survey: Parameters: Confidence level 95%, 5-point scale, 5 standard deviations, Acceptable error rate: 5%. Variables: information need (brief factual, in-depth, study for a test), format (e-book or print book), role (student, faculty). Recruitment: Emailed invitation with link to the survey to 84 medical students and 405 faculty. Emailed a reminder invitation to participate 1 week later. Participation: In question 14, participants had an option to check all of the roles that applied: 1st-year medical student (M1), 2nd-year medical student (M2), faculty, clinician, or other. Because faculty self-identified, responses do not match known numbers for each category. These responses were lumped into 1 category. Survey Instrument: Nineteen-question Qualtrics survey: the first 6 questions asked the likelihood of using a particular format for a particular information need, using a 5-point Likert scale wherein 1=very unlikely, 2=unlikely, 3=undecided, 4=likely, and 5=very likely. The responses to these 6 questions are the focus of this study. Two questions regarding e-reader use and preferences. One question regarding types of devices used to access library resources. Three questions regarding database use and preferences. Seven questions regarding demographics. Demographic data include self-identified role, gender, current age, age started using a computer, and computer use in hours per typical week.
Results: Respondents are: students=37/84 or 45%; faculty=107/405 or 26%; no response (NR)=3/147 or 2%. Findings: Question 1. How likely are you to read an e-book to find brief factual information? 110/147 or 75% responded likely or very likely; 15/147 or 10% responded undecided; 22/147 or 15% responded unlikely or very unlikely. Mean 3.87, variance 1.04, standard deviation 1.02.
• Question 2. How likely are you to read a print book to find brief factual information? 102/147 or 69% responded likely or very likely; 7/147 or 5% responded undecided; 38/147 or 26% responded unlikely or very unlikely. Mean 3.61, variance 1.40, standard deviation 1.18.
• Question 3. How likely are you to read an e-book for in-depth study of a topic? 76/147 or 52% likely or very likely; 26/147 or 18% undecided; 44/147 or 30% unlikely or very unlikely. Mean 3.31, variance 1.45, standard deviation 1.20.
• Question 4. How likely are you to read a print book for in-depth study of a topic? 124/146 or 85% likely or very likely; 7/146 or 5% undecided, 15/146 or 10% unlikely or very unlikely. Mean 4.2, variance 0.96, standard deviation 0.98.
• Question 5. How likely are you to read an e-book to study for a test? 55/112 or 49% likely or very likely; 16/112 or 14% undecided; or 41/112 or 37% unlikely or very unlikely. Mean 3.22, variance 1.71, standard deviation 1.31.
• Question 6. How likely are you to read a print book to study for a test? 92/110 or 84% likely or very likely; 4/110 or 3% undecided; 14/110 or 13% unlikely or very unlikely. Mean 4.21, variance 1.29, standard deviation 1.13.
Analysis: Comparing the means for each question shows an association between information needs and user preferences for formats. Participants were slightly more likely to use an e-book than a print book for brief factual information (3.87 versus 3.61). However, they were much more likely to use a print book than an e-book for in-depth study of a topic (3.31 versus 4.2) and to study for a test (3.22 versus 4.21). For a brief factual information need, 77/147 or 52% expressed preferences for both formats by responding likely or very likely to both formats; 26/147 or 18% expressed a strong preference for e-books by responding likely or very likely to e-book and unlikely and very unlikely to print book; 8/147 or 5% expressed a weak preference for e-books by responding 1 integer more for e-books than print books; 14/147 or 10% expressed a strong preference for print books by responding very likely or likely for print books and unlikely or very unlikely to e-book; 12/147 expressed a weak preference for print books by responding 1 integer more for print books than e-books; 10/147 or 7% responded unlikely or very unlikely for both e-books and print books. For in-depth informational needs, 58/146 or 40% responded likely or very likely to both formats; 17 /146 or 12% expressed a strong preference for e-books by responding likely or very likely for e-books and unlikely or very unlikely for print books; 52/146 or 36% expressed a strong preference for print books by responding very likely or likely for print books and unlikely or very unlikely for e-books; 15/146 or 10% expressed a weak preference for print books by responding 0.1 integer more for print books than e-books; 3/146 or 2% responded undecided for both formats. For test preparation, 35/147 or 24% responded does not apply; 51/147 or 35% responded likely or very likely to both formats; 7/147 or 5% expressed a strong preference for e-books by responding likely or very likely to e-books and unlikely or very unlikely to print book; 40/147 or 27% expressed a strong preference for print books by responding very likely or likely for print books and unlikely or very unlikely for e-books; 5/147 or 3% expressed a weak preference for print books by responding undecided for e-books and likely for print books; 4/147 or 2% responded undecided; and 6/147 or 3% responded unlikely for both formats.
Conclusions: The health sciences library originated as a 100% digital library. All resources including textbooks were electronic. Two print copies of each textbook were the first print resources added to the collection. Students continued to request that print

resources be added to the collection. Literature review revealed an association between information needs and preferences for formats. The survey was designed to evaluate the relationship between information needs and preferences for formats for students and faculty in order to develop the collection based on evidence. For all 3 information needs, 35%-52% of participants expressed being likely to read both electronic and print formats. However, for in-depth study, 36% expressed a strong preference for print resources. To study for a test, 27% expressed a strong preference for print resources. The data support the hypothesis that the number of users who prefer print format justifies purchasing both print and electronic formats for core reference books and textbooks.

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An Interdisciplinary Ethics and Health Disparities Journal Club for Responsible Conduct of Research Training

William Olmstadt, AHIP, Public Health Librarian, Bernard Becker Medical Library; **Douglas Brown,** Ethics Education Coordinator, Surgery; **Linda Ball,** Clinical Research Specialist, Geriatrics; **Michael Montana,** Predoctoral Trainee, Biology and Biomedical Sciences; **Joan Hirst,** Research Patient Coordinator, Geriatrics; School of Medicine, Washington University in St. Louis, St. Louis, MO; **Archibald Laud-Hammond,** Tuskegee University; **Luther Williams,** Tuskegee University; **Monique Williams,** Assistant Professor, Medicine and Psychiatry, Division of Geriatrics and Nutritional Science, School of Medicine, Washington University in St. Louis, St. Louis, MO

Purpose: The authors evaluate a biweekly journal club for sustained responsible conduct of research (RCR) training in the context of addressing the health issues of an increasingly diverse and aging nation.

Methods: Setting/Participants/Resources: The journal club and its leaders are faculty and staff at a private Midwestern medical school. Journal club participants are affiliated with that school and other higher education programs in the area. They represent multiple disciplines, including nursing, geriatrics, bioethics, occupational therapy, and infectious disease. Since 2010, a health sciences librarian has been included as a participant. Methods: Attendance records provide required documentation for RCR training for National Institutes of Health (NIH) and other funders. Journal club topics include informed consent, ethical implications of study design, minority recruitment, mentoring, ethical implications of health care provider involvement in research, data management, conduct of ethical literature searches, research misconduct, and authorship and publication. Participants were surveyed in winter 2011 about the impact of the journal club on their research, education, and funding efforts.

Results: A total of twenty individuals attended at least one of the journal club sessions. Journal club attendees who participated in three or greater journal club sessions were invited to complete an anonymous survey. Quantitative and qualitative feedback elicited by the survey indicated participants increased their knowledge of key responsible conduct of research topics and the ethical dimensions of RCR research.

Conclusions: A journal club format provides a relevant and effective means to increase knowledge and proficiency in RCR.

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An Investigation Report on the Impact of New Accreditation of Hospitals to Their Libraries

Lin Wen Chuan, Librarian, Department of Research Education and Training, Kaohsiung Municipal Hsiaokang Hospital, Hsiaokang, Taiwan; **Chen Kuan Nien,** Director, Kaohsiung Medical University, Kaohsiung, Taiwan

Objectives: The new hospital accreditation by Taiwan Joint Commission on Hospital Accreditation (TJCHA) has no item related to nonacademic hospital libraries. Both library staff and users do not consider that abandoning would affect the users' access to literatures. To consider hospitals' budgets, it should be possible to accept flexible arrangements regarding library staff duties and working positions.

Methods: The authors conducted this survey to gauge the opinions and operating status of library staff and library users. The registrations provided by the medical libraries and the institutions (nonacademic hospitals) for evaluation totaled 164. The research participants are divided into 2 groups: library staff and library users. This investigation adopted purpose-designed questionnaire adopted and reviewed by specialists from medical libraries. The collected data were analyzed using SPSS software. The questionnaire for staff consisted of basic information, library staffing, professional work, impact of the new accreditation on libraries work, and funding. After 164 questionnaires were distributed, 32 copies of them were received, the rate of recovery being 19.5%, while 106 hospitals responded with the fact that they have not had a library in their hospitals. Except for the 106, the recovery rate was 58.2%.

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Appraising the Evidence-Based Information Competencies, Needs, and Expectations of the International Public Health Workforce

Lorely Ambriz, Certificate of Advanced Study in Health Science Librarianship, University of Pittsburgh, and Knowledge Management and Communication Advisor, PAHO/WHO US-Mexico Border Office, Pan American Health Organization/World Health Organization, El Paso, TX

Objectives: To determine the extent to which the international public health workforce are using evidence-based information to develop policies, guidelines, norms, standards, recommendations, and other technical documents to advise health systems and services at the regional, national, and local levels. This evidence-based practice entails well-built information-finding and evaluation competences. Moreover to identify and appraise their information competencies, needs, and expectations.

Methods: A combination of a cohort study and qualitative research, through individual interviews, an online survey (prediction and exploration questions), and an historical analysis of the international public workforce current evidence-based practice and competences in 2011. An online survey was developed and distributed via email among all the international public health workforce of an international organization, to over 2,800 staff members at the technical or management level that are currently active in the human resources department roster list. Questions for the online survey were produced based on the outcomes of random individual interviews with some technical area managers in the institution, analysis of current technical publications, library services usage statistics, and prospective needs and competencies for evidence-based practice.

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Availability of E-Books in the Vision Sciences: A Snapshot in Time

Gale A. Oren, AHIP, Librarian, Kellogg Eye Center, University of Michigan–Ann Arbor

Objectives: Faculty, staff, and trainees are becoming increasingly interested in accessing vision science texts and reference books electronically. Yet, many titles are not yet available as institutional e-book purchases. This poster will show a snapshot in time of the availability of electronic vision science titles.

Methods: Utilizing a variety of lists of books in the vision sciences, each title was checked for electronic availability. The lists include: (1) Kellogg Eye Center, Recommended Reading for Residents; (2) Association of Vision Science Librarians (AVSL) Opening Day Book List; and (3) list of all titles purchased for the Kellogg Eye Center Library within the past two years. Each list is current, and they target various audiences and serve different purposes. The numbers for each list will be analyzed and presented.

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Broadening Our Game: Strengthening E-Professionalism among Students

Alexandra Gomes, AHIP, Associate Director, Education, Information and Technology Services, Himmelfarb Health Sciences Library; **Tom Harrod,** Reference and Instructional Librarian, Himmelfarb Health Sciences Library; **Gisela Butera,** Reference and Instructional Librarian, Himmelfarb Health Sciences Library; **Laura E. Abate,** Electronic Resources and Instructional Librarian, Himmelfarb Health Sciences Library; **Anne Linton, AHIP,** Director, Himmelfarb Health Sciences Library, School of Medicine and Health Sciences; George Washington University, Washington, DC

Objectives: To describe the initiatives undertaken by Himmelfarb Health Sciences Library to develop curricular modules on various aspects of e-professionalism including social media, copyright, plagiarism, intellectual property, and appropriate computer use.

Methods: As the borders between online and actual lives blur, the Himmelfarb Library recognized the need for e-professionalism instruction. In order to encourage students to apply real-life professional behavioral norms to their online behavior, two modules were developed. The first module focuses on social media including blogging, Facebook, and Twitter. The second module focuses on respect for intellectual property, copyright, plagiarism, and appropriate computer use. Both modules are case based and integrated with the formal curriculum. The module formats are flexible to permit coverage of the topic in one to two hours. If a longer time period is available for instruction, the core material is augmented by discussion with a panel of health care or legal experts who have experience in the relevant topics.

Results The first module focusing on social media was successfully integrated into multiple curricula, including the school of medicine, the school of public health, the school of nursing, and the physician assistant program. Each integration took a slightly different approach in order to best meet the needs of the students and fit into the course or orientation structure. The second module was integrated into the school of medicine's curriculum.

Conclusions: Both modules were well received by students, and faculty have expressed interest in repeating these modules with future groups of students. Development of the modules and tailoring the examples to the specific audiences is time consuming but results in greater impact and relevance. The library's initiative in developing the modules has resulted in positive visibility for the library as well as bolstering the library's role as a partner in the formal curricula.

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Changing Nursing Liaisons: Growing Visibility through a Faculty Publications Study

Adrianne Leonardelli, Research and Education Services Librarian; **Virginia R. M. Carden, AHIP,** Administrative Research Librarian; **Emma Cryer,** Electronic Resources and Serials Manager; Medical Center Library & Archives, Duke University, Durham, NC

Objectives: To expand the role of the library liaison to the school of nursing (SON) by creating a database of faculty publications and using this data to assess the library's collection and better serve this user population.

Methods: After a respected SON liaison retired, the library had to reestablish this role. To increase visibility and expand beyond traditional services, the new liaison worked with the administrative research and electronic resources librarians to create an EndNote Library of faculty publications. The database contains publications produced by Duke University SON faculty from 2006 to 2011. Author searches were performed in PubMed, CINAHL, and Web of Science, and combined with an organization-specific address search. Results were exported into EndNote, organized by author, de-duped, and compared to SON publication lists. References not found in database searches were located manually using PubMed Single Citation Matcher or citation-specific searches. Citation information was exported into a spreadsheet with the following data: journal title, number of citations by year, Duke Libraries coverage, and impact factor (when available). In addition, AIM and Core Nursing Journals were identified, as well as each journal's indexing status in CINAHL and MEDLINE/PubMed.

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Changing Our Game: Preparing for Success

Joe Swanson Jr., Interim Director; **Roland Bernard Welmaker,** Archivist, Librarian, and Instructor; **Xiomara Arango,** Manager, Technical Services; **Tara Douglas-Williams,** Manager, Information Services; Library, Morehouse School of Medicine, Atlanta, GA

Objectives: A survey was conducted to assess the level of satisfaction with the Morehouse School of Medicine Library (MSML), its personnel, and its services. The results will be used to improve efforts to provide the users with the best information services, resources, and processes for their needs.

Methods: After several requests from accreditation agencies, educational organizations, and others for information concerning user satisfaction, the librarians of the MSML came together to review previous surveys. Realizing that it has been some time since we had polled our users, a new survey was developed. The decision was made not to use LibQUAL as in previous surveys, but to utilize the library's account with SurveyMonkey. Section one of the survey concerned staff and resources, and section two was concerned with demographics and library usage. Library staff and a selected group of faculty, staff, and students pretested the survey, and their comments were incorporated into the survey. The

results from the pretest group were removed from the data pool, and the survey was reopened to all faculty, staff, and students.

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Changing the Rules: Customizing Primo to Meet Our Unique User Needs

Michelle Frisque, Head, Information Systems; **Linda O'Dwyer,** Communications Coordinator and Education Librarian; **James Brucker,** Instructional Design Librarian; **Mark Berendsen,** Electronic Services Librarian; **Steve Hunt,** Web Programmer; **Jeremy Prevost,** Web Applications/Software Developer; Galter Health Sciences Library, Northwestern University, Chicago, IL

Objectives: Implement a single search box that would simultaneously search the libraries' shared catalog, Primo Central (an aggregated collection of scholarly electronic resources such as articles, book chapters, reports, etc.), the health sciences library website, and PubMed, instead of searching each collection separately.

Methods: Over the last year, the library developed an interface that would search several library systems from a single search box. In April 2011, the new interface was released to the library's user community. The library decided to create its own interface using vendor application program interfaces (APIs) and direct database calls instead of using Primo's out-of-the box interface. We selected this option so we could customize the interface to better suit our users' needs without being constrained by the software's built-in interface. Customized features the library created included checking the availability of an item in real-time, subject browse, reordering the links to the e-versions, searching PubMed data directly, displaying popular facet choices persistently (i.e., journal and book), inserting the library' proxy uniform resource locator (URL) into electronic resources links, fixing Functional Requirements for Bibliographic Records (FRBR) display bugs, and creating quick links to hard to find and popular resources.

Results and Conclusions: Knowing what we know now, the library would still do this project again; although there are things we would do differently. For instance, we would have included a subject browse for online journals and books, which was a popular feature of the old search tool but did not exist in this new search interface. We also would not have combined the data in Primo and PrimoCentral into the same results list, because users found the results overwhelming. Using the vendor APIs instead of Primo's out of the box interface gave us the flexibility to customize and adapt the interface to better support our users needs.

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Coding Translational Research: Going Beyond T1/T2/T3

Alisa Surkis, Translational Science Librarian, NYU Health Sciences Libraries, New York University–New York; **Rupinder Hayer,** Program Coordinator, Evaluation and Tracking, Clinical and Translational Science Institute, New York University Langone Medical Center–New York; **Colleen Gillespie,** Assistant Professor, Division of General Internal Medicine, School of Medicine, New York University–New York

Objectives: The definitions of the phases of translational research (e.g., T1/T2/T3) are broad, varied, and often ambiguous, and therefore of limited utility in assessing and understanding whether or not and how research is translational. Our goal was to produce a more fine-grained typology and vocabulary, useful for evaluating the impact of our Clinical and Translational Science Award (CTSA) and for deciding how best to allocate resources.

Methods: We identified an initial set of parameters that spoke to core aspects of translational research, such as the multidisciplinary nature or directionality (toward the "bench" or the "bedside") of a study, as well as more generic parameters, such as research design or human versus animal study, all of which were critical in characterizing the translational qualities of the research. We then examined the degree to which these parameters were useful and usable in describing the pilot studies funded by our CTSA. By applying the parameters to each study, we were able to see whether the typology and vocabulary needed further refinement or expansion in order to fully characterize the research, using an interactive process to reach our final coding and analytic scheme.

Results: We developed eight parameters that spanned the subject, action, and methodology of the research and four parameters that captured the nature of the research team. The research categories were target of study, research action (e.g., examining mechanism, treating condition), whether clinically or methods focused, clinical problem addressed, broader disease or condition group, immediate study outcome (e.g., association, protocol), long-term implications of study (e.g., treatment, diagnosis), research design, and directionality. The variables to define the collaborative/multidisciplinary nature of the research team were number of researchers, institutions, departments, and areas of expertise of the researchers.

Conclusions: Going beyond the broad designations of T1/T2/T3 to more finely grained variables provides a useful evaluation framework for a CTSA to assess factors such as the collaborative nature or directionality of studies funded, to recognize areas where strengths can be leveraged or weaknesses need to be addressed, and in turn to allocate resources accordingly.

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Comment Article Indexing for MEDLINE

Kristen B. Greenland, NLM Associate Fellow, National Library of Medicine, Oregon Health & Science University–Portland

Objectives: The purpose of this project was to evaluate the efficacy of the current comment article indexing policy at the National Library of Medicine (NLM) and to determine the feasibility of automatically indexing comment articles for MEDLINE.

Methods: Trends in comment article publishing and indexing were assessed through PubMed searching. To determine feasibility of automatically indexing comment articles, two potential sources of Medical Subject Headings (MeSH) were evaluated: terms from the original research article being commented on and title terms suggested by the medical text indexer (MTI). Terms assigned by human indexers to comments were compared to these two sets of terms, and the overlap was analyzed.

Results: Approximately 70% of terms assigned by indexers to comment articles matched terms assigned to the article being commented on. Of the remaining terms that did not match, about two-thirds were found in the same MeSH tree as terms assigned to the commented on article. Comments with the additional publication types letter, news, editorial, or journal article all had similar levels of matching terms. The percentage of terms that matched when using only MTI title terms was much lower. However, a combined approach using terms from the commented on article and additional title terms suggested by MTI increased the percentage of matches to above the level for commented on article terms alone.

Conclusions: Automatic indexing, either with terms from the commented on article alone or using the combined approach is the best possible solution for handling comments based on the findings in this study. Automatic indexing of comments using terms from the commented on article was therefore implemented on October 6, 2011. This will lead to savings in contract indexing costs, while maintaining high-quality indexing for these articles.

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Consumer Health and Mobile Technology: Can an iPhone Keep You Healthy?

Linda Hasman, Clinical and Translational Science Institute Liaison Services Librarian, Edward G. Miner Library, University of Rochester, Rochester, NY

Objectives: Evidence suggests that mobile phones can positively affect health outcomes through text messaging, photo taking, and fast transfer of data. This research project will build on previous studies in mobile technology and health by providing an analysis of a sampling of apps found in Apple's iTunes store.

Methods: An analysis of apps will be limited to what can be found in Apple's iTunes store. The "Health and Fitness" and "Medical" categories will be searched to find a cross-section of apps to analyze for content. Apps will be further divided into the following categories: reference, diet and nutrition, exercise and fitness, calculators, drug resources, emergency and first aid, and chronic disease management. Apps will be chosen for analysis based on (1) keyword searching in the above-mentioned categories, then (2) number of downloads. The most downloaded apps will be chosen for content analysis. Once the apps are chosen, analysis will be based a number of criteria, including adherence to evidence-based principles, reliability, and usability.

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Defining the Library's role in VIVO

Colleen Cuddy, AHIP, Director; **Paul Albert,** Digital Services Librarian; Weill Cornell Medical Library, Weill Cornell Medical College, New York, NY

Objectives: VIVO is an open source semantic web application that enables the discovery of research through interlinked profiles of people and other research-related information. Librarians play invaluable roles in implementing and improving VIVO, assisting with data quality and provenance as well as characterizing researchers' information needs. This poster will define the expertise librarians bring to VIVO implementations and suggest future roles.

Methods: Building upon the work of librarians at our institution—such as identifying target data sources, negotiating with data stewards, modeling data in a semantic way, resolving gaps and conflicts, and defining policy—the authors will develop a survey tool and survey librarians at institutions with VIVO implementations. The survey tool will query librarians about their current role and contributions as well as anticipated contributions. Additional questions will define the amount of time devoted to VIVO as well as funding sources for their efforts. The poster will graphically display the key results of the survey and suggest future directions for libraries and VIVO, providing data for libraries still considering their role in VIVO implementations.

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Developing a Health Sciences Library Mobile Website: What Do Users Want?

Adelia Grabowsky, Student, Certificate of Advanced Study in Health Sciences Librarianship, University of Pittsburgh, Pittsburgh, PA, and Instructor/Reference Librarian; **Melissa Wright,** Assistant Professor and Reference Librarian, Instructional Services; Rowland Medical Library, University of Mississippi Medical Center–Jackson

Objectives: To determine the following about a proposed academic health-sciences library's mobile website:

1. What information and resources are considered essential to include on the mobile site?
2. What format is preferred for the site itself?

Methods: Three focus groups with a total of twenty-two participants were held at an academic health sciences library. The groups—which were composed of faculty and students of the schools of medicine, nursing, and graduate studies—were asked a series of questions to elicit information about what specific information and resources they considered essential on a health sciences library mobile website. In addition, three sample mobile websites were presented and explored to evaluate participants' format preference.

Results: Although most of the students are not currently using mobile devices to access the library's website, they do use them to access other websites on a frequent basis and indicated they would be more likely to use them for the library's web page if a mobile site were available. There was a unanimous desire for access to e-journals, PubMed, the library's catalog, hours, and holiday information and a link to the full library website. There was significant interest in e-books and Ask a Librarian services. There was no interest in having library maps or "quick" links to specific journals or databases (other than PubMed and UpToDate) on the mobile site. Although students expressed an interest in a mobile site option to choose between all resources or just those with mobile format, if that option were not available, they want to be able to see all the library has, not just those things available in mobile format. All students expressed a desire to search for articles from a mobile site, although most stated that they would read them later on a computer or in print form. Only medical students indicated that they would, in certain circumstances, be reading articles on the mobile device. There was unanimous interest among the medical students in having a quick link to UpToDate and high interest among graduate students in being able to reserve library study carrels on the mobile site or at least to know if they were all occupied. With one exception, students and faculty members preferred the sample mobile site format, which consisted of a scrollable list of text links over an icon format or a tab-list format.

Conclusions: There is significant interest in and desire for a mobile library website among students and faculty interviewed. The library needs to move forward on creating a mobile site using a streamlined text list format and including access to the library's catalog, databases, e-journals, e-books, hours and holiday information, Ask a Librarian contact information, and quick links to PubMed and UpToDate. The library needs to consider the (currently unavailable) possibility of reserving study carrels and/or having information about availability of carrels on the mobile site. Further investigation should be conducted with students from the school of health related professions, dentistry, and nursing, all of which had low or no participation in the three focus groups.

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Digitization Programs: Developing Work Flows and Collaborations among Health Sciences Libraries

Mark Hopkins, Library Technology Manager; **Joy Summers-Ables, AHIP,** Associate Director and Head, Library Computing; Robert M. Bird Library, University of Oklahoma Health Sciences Center–Oklahoma City

Objectives: To demonstrate approaches and opportunities in the development of work flows supporting digitization programs for individual libraries and health sciences libraries as a whole. The focus is on considerations that impact the development of work flows that create sustainable programs for libraries, promote interoperability and use of standards, and draw on the broad knowledge and collaborative nature of health sciences libraries.

Methods: Through the support of a National Network of Libraries of Medicine (NN/LM) award, the Bird Library worked with a small population of library staff in an in-house library setting to craft, train, and implement work flows for a digitization program. Additionally, library staff made inroads toward broader collaboration through an information-sharing experience that took place at the Louisiana State University Health Sciences Center- Shreveport to develop documentation to aid the understanding and application of work flows to all health sciences libraries.

Results: Preliminary findings have shown that internally developed work flows are able to support organizational goals and maintenance of a digitization program. Additionally, collaboration with Louisiana State University Health Sciences Center-Shreveport highlighted consistencies in practice across libraries and areas for improvement and understanding as well as helped established the groundwork for sharing documentation and lessons learned with other libraries.

Conclusions: Library community collaboration is an integral component along with well-organized and clear work flows. By drawing from the pooled expertise, it is possible to increase the time and enhance the quality of developing an in-house digitization program.

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Engaging Librarians for Future Organizational and Professional Success

Michelle Frisque, Head, Information Systems, Galter Health Sciences Library, Northwestern University, Chicago, IL

Objectives: This study measured academic librarians' engagement in their current organizations and with the profession. Engagement is measured by the extent to which employees commit to their work physically, cognitively, and emotionally. Organizational triggers for disengagement were identified so libraries can seek solutions to reengage the librarian workforce for future organizational and professional success.

Methods: A web survey was emailed to a random sampling of currently employed academic librarians in the United States, who have been in the profession for at least 5 years and whose position is no higher than middle management. The survey consisted of 6 parts and included 45 closed questions and 2 open questions. Part one measured overall engagement. Parts 2, 3, and 4 measured engagement at the job, unit, and organizational level. Part 5 measured engagement at the professional level. Part 6 contained demographic questions and 2 open-ended questions designed to solicit feedback from participants. All questions in parts 1 to 5 were scored on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Chronbach's alpha measure was used to determine the internal consistency for each area measured.

Results and Conclusion: While the majority of the respondents reported they were somewhat to strongly engaged in their current position, approximately 26% of the respondents stated that their engagement level ranged between strongly disagree to neither agree/nor disagree. Respondents were most engagement at the individual job level, followed closely by their department. Respondents were least engaged at the organizational level with a mean score of 4.65 (neither agree/nor disagree). It does not appear that an individual's engagement with their current position affects their engagement with the profession as a whole. The mean score for professional engagement was 6.07 (agree).

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E-Science Engagement among Health Sciences Libraries

Bart Ragon, Associate Director, Knowledge Integration, Research and Technology; **Andrea S. Horne,** Research and Data Services Manager; Claude Moore Health Sciences Library, University of Virginia–Charlottesville

Objectives: To determine the state of e-science support by health sciences libraries by assessing current areas of engagement, professional development efforts, strategies for staffing, and service enhancement and development.

Methods: In 2010, an academic health sciences library established e-science support as a strategic priority. Partnerships with National Network of Libraries of Medicine (NN/LM), Southeastern/Atlantic (SE/A) Region, and the Mid-Atlantic Chapter of the Medical Library Association (MAC/MLA) allowed the library to sponsor an e-science boot camp and establish an e-science planning group. To further investigate e-science activities at academic health sciences libraries, an online survey of health sciences library directors was conducted. The survey examined how libraries are organized to provide e-science-related services, and what activities are being provided, including reference, consultations, training, and collection development. Staff development to build e-science-related skills for professionals was also examined. Information gathered from these e-science efforts is shared to support skill building, partnerships/community, and service delivery among other libraries and to further the discussion about library support for this emerging area.

Results and Conclusions: The survey was performed in the late summer of 2011, and twenty-seven were returned. The results found that libraries' institutions were organized in many different ways to provide e-science and data support on their campuses, with information technology a frequently reported partner in these efforts. Several methods were utilized to lead e-science initiatives, including group-led efforts. Of the specific services that were offered, most were led by liaison librarians, perhaps as an extension of their research support activities. Most libraries were utilizing existing staff and providing training opportunities to increase their knowledge. Many libraries did report having dedicated data librarians, representing, perhaps, a newer area of health sciences librarian specialization. Several libraries were involved in developing or purchasing researcher network and collaboration tools, indicating another area for potential campus-wide involvement for libraries. Many libraries were investigating available technologies to back e-science initiatives around data, and some had created data management websites for use by

their constituents. With data-driven research common at today's academic medical centers and funding agencies such as the National Science Foundation requiring data sharing, many academic libraries have already begun to provide e-science support. This report can serve as a source of information for libraries interested in comparing activities to others and perhaps even a resource for finding areas of potential library collaboration.

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Evidence-Based Practice in PubMed: Are Shared Filters Useful to Health Sciences Academic Users?

Monique Clar, Medical Librarian; **Patrice Dupont,** Librarian; Bibliotheque de la sante, Université de Montréal, Montréal, PQ, Canada

Objectives: In April 2010, the Université de Montréal's Health Sciences Library implemented shared filters in its institutional PubMed account. Most of these filters were designed to highlight resources for evidence-based practice, such as Clinical Queries, Systematic Reviews, and Evidence-based Synopsis. We now want to measure how those filters are perceived and used by our users.

Methods: For one month, data were gathered through an online questionnaire proposed to users of Université de Montréal's PubMed account. A print version was also distributed to participants in information literacy workshops given by the health sciences librarians. Respondents were restricted to users affiliated to our university's faculties of medicine, dentistry, veterinary sciences, nursing, and pharmacy. Basic user information such as year or program of study or department affiliation was also collected. The questionnaire allowed users to identify the filters they use, assess the relevance of filters, and suggest new ones.

Results: Survey results showed that the shared filters of Université de Montréal's PubMed account were found useful by the majority of respondents. Filters allowing rapid access to secondary resources ranked among the most relevant (Reviews, Systematic Reviews, Cochrane Database of Systematic Reviews, Practice Guidelines, and Clinical Evidence). For Clinical Study Queries, randomized controlled trial (therapy/narrow) was considered the most useful. Some new shared filters have been suggested by respondents. Finally, 18% of the respondents indicated that they did not quite understand the relevance of filters.

Conclusion: Based on the survey results, shared filters considered most useful will be kept, some will be enhanced, and others removed so that suggested ones could be added. The fact that some respondents did not well understand the relevance of filters could potentially be addressed through our PubMed workshops, through online library guides, or by renaming of some filters in a more meaningful way.

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Examining the impact of the National Institutes of Health Open Access Policy: A Case Study

Sandra L. De Groote, AHIP, Scholarly Communication Librarian, Daley Library, University of Illinois–Chicago; **Mary Shultz, AHIP,** Regional Head Librarian, Library of the Health Sciences-Urbana, University of Illinois–Chicago, Urbana/Champaign, IL; **Nicole Buccella,** Graduate Assistant, Library of the Health Sciences-Urbana, University of Illinois–Chicago, Urbana/Champaign, IL

Objectives: As of April 7, 2008, all peer-reviewed articles resulting from research funded by the National Institutes of Health (NIH) are required to be submitted to PubMed Central (PMC). It is been reported that research made freely available will be accessed and cited more than articles only available through subscriptions. This study seeks to measure the potential impact of the NIH policy to date.

Methods: Searches by author affiliation for the institution examined in the study were run for the year 2009 in PubMed. The results were further limited to articles funded through NIH, creating two lists of articles: those funded and those not funded by NIH. Verification of presence in PMC was determined by the presence of a PMCID in PubMed. To avoid confounding, the researchers excluded articles published in open access journals. The cited references for each publication in each list were downloaded from Web of Science, Google Scholar, and Scopus to determine the total number of citing references for each article. The total number of citing references were compared to determine what if any differences existed in the number of citing articles between open access articles and non-open access articles.

Results: Typically, Google Scholar found the greatest number of citing reference for each article, while Web of Science presented the fewest number of citing references for both PMC and non-PMC articles. The number of citing references for PMC articles was overall higher than the citing references for non-PMC articles.

Discussion: The results indicate that the NIH public access policy has led to an increased impact of research due PMC availability. However, a methodological flaw was noted where the PMC articles selected for this study came from journals with a slightly higher impact factor than the journals that provided the non-PMC articles. The methodology is being revised to overcome the confounding variable.

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From F2F to Online: Optimizing Success for Online Health Informatics Mini Courses

Margaret (Peg) H. Burnette, Regional Assistant Librarian-Peoria, Library of the Health Sciences, University of Illinois–Chicago, Peoria, IL

Objectives: Online courses can be an effective method for providing comprehensive instruction to a large number of participants regardless of geography. Asynchronous courses provide a self-paced learning experience that can accommodate individual schedules. The development of two "mini courses" necessitated the exploration of instructional models and best practices for medical informatics education.

Methods: Health sciences library faculty developed two online mini courses for informatics instruction. The first is "Medical Informatics" (MI), a two-week elective for third- and fourth-year medical students that was conceived as an asynchronous online course. More recently, the "Introduction to Evidence-Based Practice" (EBP) course, which had previously been offered as a three-day face-to-face course, was transitioned to an asynchronous, self-paced online course for librarians and health practitioners. MI course was built entirely from scratch. While content for the second course already existed, course design, technical considerations, and sustainability were challenges both projects had in common. Investigation of existing models and best practices informed content and design decisions for both courses. Feedback from pilot offerings and from participants who have completed the courses provides additional opportunity for ongoing refinements.

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Getting Patrons into the Game: Utilizing Thirty-Minute Workshops and Theme Weeks to Improve Workshop Attendance

Ryan Harris, AHIP, Reference and Research Services Librarian; **Anna Tatro,** Liaison and Outreach Services Librarian; Health Sciences and Human Services Library, University of Maryland–Baltimore

Objectives: An academic health sciences library offers a series of workshops throughout the semester for the entire campus community. These workshops are taught on a variety of topics including database searching and RefWorks. They are taught in addition to curriculum-specific instruction by liaison librarians. The workshop planning committee aimed to increase attendance of library workshops.

Methods: The workshop planning committee continues to make changes to workshop offerings. Two new changes since the fall of 2009 included offering 30-minute workshops and offering a week of workshops that fit under 1 cohesive theme. Traditionally workshops are taught for an hour; newly developed 30-minute workshops covering technology-specific topics were offered as part of the library's workshop schedule and promoted as "Workshops in 30." Topics covered include "Twitter," "RSS Feeds," and "20 New Technologies in 30 Minutes." Preexisting or newly developed workshops that fit a particular theme were offered together as workshop theme weeks. Theme weeks offered include "Social Networking" and "Google: Beyond Searching." Both 30-minute workshops and theme weeks were publicized via fliers distributed throughout the campus, the library's newsletter, Facebook, and letters sent out to each school on campus promoting the workshop schedule.

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Growing Knowledge and Connections across Disciplines: An Interdisciplinary Faculty Learning Community Focused on Active Learning

Teresa L. Knott, AHIP, Director, Tompkins-McCaw Library for the Health Sciences, and Associate University Librarian, VCU Libraries; **Cheryl N. Bodamer,** Simulation Educator, School of Medicine; **Meredith L. Bryk,** Director, Curriculum Advancement, School of Dentistry; **B. Ellen Byrne,** Senior Associate Dean, School of Dentistry; **Shannon D. Jones, AHIP,** Associate Director, Research and Education Services, Tompkins-McCaw Library for the Health Sciences; **Joan M. Pellegrini,** Associate Professor, School of Dentistry; **Michael F. Weaver,** Associate Professor, School of Medicine; **Isaac Wood,** Senior Associate Dean, Medical Education and Student Affairs, School of Medicine; Virginia Commonwealth University–Richmond

Objectives: To describe Virginia Commonwealth University (VCU) faculty learning communities; the formation of an interdisciplinary faculty learning community focused on Process Oriented Guided Inquiry Learning (POGIL), a type of active learning; and assess the group's progress toward group goals and objectives.

Methods: Annually, the VCU Center for Teaching Excellence supports the formation of a limited number of faculty learning communities (FLC) focused on exploring topics ranging from creativity to critical thinking. Two Tompkins-McCaw Library for the Health Sciences faculty members joined six faculty members from the VCU Schools of Dentistry and Medicine to form the Process Oriented Guided Inquiry Learning FLC. The group meets twice monthly. The goals of the POGIL FLC are to:

- Learn POGIL to teach others.
- Share insights about other models of active learning.
- Understand elements of active learning.
- Create new knowledge including publication.
- Enhance interprofessional education.

Results: To date, the following are the results of this collaboration:

- Fostered a deeper understanding of learning environments common to participants.
- Demonstrated consistent collaboration and teamwork between disciplines.
- Developed an active learning matrix.
- Created POGIL exercises for dissemination.

Conclusions: The VCU POGIL FLC has achieved its primary objective of forming a faculty group focused on interdisciplinary learning strategies and made progress in meeting other objectives.

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Health Information Needs in the House That Love Built: Outreach to Ronald McDonald House Dallas

Jamie E. Peacock, Outreach Librarian; **Siobhan Champ-Blackwell,** Contractor; National Library of Medicine, Bethesda, MD

Objectives: Identify the types of health information parents and family members residing at a Ronald McDonald House need. Uncover common barriers to accessing online health information among parents and relatives of ill children. Determine how medical libraries could best provide health information support and access onsite.

Methods: I resided at the Ronald McDonald House Dallas (RMHD) for one week. While there, I explored house routines, did informal interviews with residents, and staffed a nightly exhibit/information table about our library's health information resources. Through participant observation of the RMHD culture, I was able to get a more in-depth understanding of the health information needs and barriers faced by RMHD residents. From my qualitative research findings, I formulated a plan to support ongoing health information access at the RMHD. I enlisted the help of a local medical library to provide training about our library's resources to RMHD staff, and I assisted RMHD staff in applying for a monetary award to support a technology upgrade to their in-house library.

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Healthy Communities: A Snapshot of Outreach

Kate Saylor, Outreach Librarian, Taubman Health Sciences Library; **Merle Rosenzweig,** Librarian, Taubman Health Sciences Library; **Anna E. Schnitzer,** Librarian, Taubman Health Sciences Library; **Katy Mahraj,** Student, Taubman Health Sciences Library; **Laura Jadwin-Cakmak,** Student, Health Behavior and Health Education; University of Michigan–Ann Arbor

Objectives: From programs and exhibits to instruction and beyond. A review of activities from an innovative academic health sciences library outreach program. This poster will examine the growth of an outreach program through a discussion of communities served, partnerships forged, and the resources that bring them together.

Methods: The mission of outreach for the University of Michigan Taubman Health Sciences Library is to promote the health of our community by way of improving access to high-quality health information, with an emphasis on underserved communities and the elimination of health disparities. Our "MLibrary Healthy Communities" program is the external community engagement portion of our outreach services. We assist public health workers, public libraries, community-based organizations, and the general public. This poster will highlight various activities, communities, resources, and tools that have been used to serve this mission and develop a successful outreach program. Lessons learned and future directions will also be discussed.

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Hit a Home Run as a Medical School Librarian

Rebecca Raworth, Island Medical Program Librarian, McPherson Library, University of Victoria, Victoria, BC, Canada

Objectives: To hit a "home run" as a medical school librarian, it is important to seize opportunities to collaborate with students. Without dedicated course time in the curriculum, informatics librarians are challenged to embed themselves into the program. By realizing nontraditional, informal opportunities to support student-led initiatives, librarians gain credibility and promote a greater understanding of librarians' expertise and competence.

Methods: In a distributed undergraduate medical program, a keen, impassioned student asked interested students to form a working group on social media and professionalism with her. She had noticed that nothing about the topic was addressed in the curriculum, nor in policies, despite heavy usage of social media among her classmates. While her email request was targeted at first-year medical students, the program librarian at a distributed site took the initiative to contact the student and ask if she could help in any way. After the librarian explained that she could help the group with literature searches, current awareness, ethics approval, survey design, and writing, the student was keen to engage the librarian. The collaboration was composed of one librarian, an associate dean, and two medical students from two different sites and met sporadically via email and phone.

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Identifying an Opportunity and RISe-ing to the Challenge

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Objectives: The Research Information Services (RISe) program is intended to increase awareness of library resources and services in the research communities on the University of Utah Health Sciences Campus, to determine needs researchers have that are not being met, and to develop new services that address those needs if they are within the scope of the library.

Methods: The RISe program focuses on the promotion of current library services to and the development of new services for the research communities of the University of Utah Health Sciences Campus consisting of a school of medicine and colleges of nursing, pharmacy, and health, all of which have research components. The marketing of current library services includes rebranding efforts, support from the new research librarian who makes on-site visits to research labs, and promotion as a basic science research service core. Plans for the development of new services consist of classes on topics not previously offered by the library.

Results: The RISe program has been promoted to various research groups on campus and is now listed as a service core on a basic science core facilities web page. On-site visits have improved awareness of the library and the new research librarian. Knowledge/training gaps were found in the areas of National Center for Biotechnology Information databases and tools, data management, and software tools such as Adobe Illustrator. The library is considering developing classes to fill these training needs.

Conclusions: The development of the RISe program is still ongoing and it will continue to grow as current needs change and new needs are discovered.

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Increasing the Findability of E-Books

Karen S. Grigg, AHIP, Associate Director, Collection Services; **Elizabeth M. Berney,** Library Service Desk Manager; **Emma Cryer,** Electronic Resources and Serials Manager; **Barbara Dietsch,** Serials Manager; **Adrianne Leonardelli,** Research and Education Services Librarian; **Richard A. Peterson, AHIP,** Deputy Director; **Patricia L. Thibodeau, AHIP, FMLA,** Associate Dean; Medical Center Library & Archives, Duke University, Durham, NC

Objectives: This poster describes the methods utilized by Duke Medical Center Library and Archives (DUMCL&A) in order to increase patron use of e-books by enhancing searchability and discovery of available e-books in the libraries.

Methods: Recent user assessment revealed a preference for e-books over print. Additionally, DUMCL&A lost a significant amount of space, requiring weeding of print titles. In response, DUMCL&A allotted 75% of the book budget to e-book purchases. In order to increase usage of these titles, a task force was formed to enhance searchability of e-books. The committee used the capabilities of Endeca, a faceted search product; Serials Solution, Duke's link resolver; and Aleph, our integrated library system, in order to allow patrons better access to our e-book collections. In addition, the task force identified and implemented various methods to promote our e-book collection.

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Is the Grass Greener? Cross-Borders Comparison of Factors Relevant to Librarian Involvement in Undergraduate Medical Education in the United States, Canada, and Japan

Elena Springall, Coordinator, Resource Sharing, Gerstein Science Information Centre, University of Toronto, Toronto, ON, Canada; **Stephanie C. Kerns,** Head, Education and Outreach, and Curriculum Librarian, Galter Health Sciences Library, Northwestern University, Chicago, IL; **Makiko Yoshida,** Reference Librarian, Shinanomachi Media Center (Kitasato Memorial Medical Library), Keio University, Tokyo, Japan

Objectives: To compare factors relevant to librarian involvement in undergraduate medical education (UME) across the United States, Canada, and Japan. These factors include: (a) the health care system, (b) structure of UME, (c) librarian education, and (d) library involvement in UME.

Methods: A literature search was completed in order to make comparisons at the national level for factors (a) through (d). Library involvement in UME is compared at the institutional level based on the authors' experiences.

Results: Health care systems were different across all three countries, with the United States being least socialized and Canada most. Medical and librarian education are very different in Japan compared to Canada and the United States. The degree to which librarians are involved in UME varies by institution, although all the librarians are integrated into the curricula of their medical schools.
Conclusions: While causal relationships cannot be drawn between the factors examined, hypotheses are made regarding how factors might impact the strength of librarians presence in UME.

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Lean Manufacturing Problem Solving Approach to Journal Access Issues
Linda Matula Schwartz, AHIP, Library Director, Health Science Library; **Kristine A. Petre, AHIP,** Senior Medical Librarian, Library Services; Lehigh Valley Health Network, Allentown, PA
Objectives: Maintaining 10,000 e-journal links is difficult even with a commercial A-to-Z list product. This issue is a high-impact value stream for the library since these problems cause significant frustration for users, affect user satisfaction, and consume significant manpower. Library staff used lean manufacturing principles to create a logical process for troubleshooting and tracking article linking and access issues.
Methods: Library staff were trained in lean management principles via textbook readings and multiple e-learning modules. Since a core lean principle requires that frontline staff must be fully engaged in the process, a library technician became the owner of the project. Within the Lean A3 framework, five potential journal access streams were identified: PubMed LinkOut, EBSCO Admin linking, Links@OVID, EBSCO AtoZ, and direct from publisher subscriptions including transmission of accurate data from publishers to the Open URL link resolvers. Following extensive process mapping, countermeasures were developed to address the deficiencies uncovered. Three methods to create a problem reporting system (online form with Excel spreadsheet, Word documents, and Sharepoint list integrated with MS Outlook tasks) were tested using a rapid experiment model.
Results: The assessment of the initial state indicated that there was no well-defined process or procedures to assess the nature of problems, to assign follow-up to the appropriate staff person, and to track progress on solving problems as well as to discover problem patterns that extend beyond single titles to entire title collections. After process mapping, standardized procedures were written for each access stream. Rapid experimentation led to the implementation of MS Sharepoint lists and development of a staff reminder system. Since all staff use MS Outlook, the integration of Sharepoint lists aligned with existing staff workflow. Overall staff knowledge of the troubleshooting process increased, and ownership of some processes were successfully transitioned from a librarian to technical staff. Duplicate reports of problem issues decreased, and documentation of problem solutions increased.
Conclusions: Users care deeply about instant access to electronic journals when they need articles. Any obstacle decreases satisfaction with the library's services. But virtual library services do not happen by themselves. The complexity of managing journal access issues from a variety of sources is time-consuming for library staff. Applying the lean manufacturing approach to a complex library process issue was effective in uncovering root causes of problems, creating a visual map of the troubleshooting processes, and delineating new procedures. The A3 structure kept the investigation focused and ensured that frontline staff provided input and remained engaged.

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Leveraging National Library of Medicine Exhibits for Outreach and Community Engagement
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Objectives: The National Library of Medicine's (NLM's) traveling exhibits provide libraries opportunities to engage our users and change their perceptions of what libraries can offer. In 2010, our library started developing events surrounding an NLM traveling exhibit coinciding with efforts to make the library's space more welcoming and relevant. This poster reports on lessons learned hosting this and two subsequent traveling exhibits.
Methods: From fall of 2010 through 2011, the Health Science Center Library (HSCL) hosted three NLM traveling exhibits and accompanying events series. Following each exhibit and events series, members of the planning team performed a self-assessment of successes and challenges, the outcomes of which were used to inform planning of subsequent exhibits and events. One notable outcome of our first self-assessment was the development of a detailed marketing plan for all HSCL events, which provides a customizable template reaching out to a variety of communities. To further assess the impact of our programming and marketing efforts, we surveyed attendees at all events accompanying the second two exhibits, asking them how they would prefer to learn about library events, preferred types of future events, and whether the event changed their perceptions of what the library has to offer.
Results: The 18 events affiliated with our 3 NLM traveling exhibits attracted over 225 attendees from across the university and beyond. A majority of attendees who completed surveys reported being more likely to use the HSCL and having changed perceptions of what the library has to offer after attending exhibit-related events. Attendees had uniformly positive comments about the content of events and expressed interest in seeing similar events hosted by the library in the future. The quality of events was largely influenced by the library's partnership with a wide

variety of organizations and individuals, from funders to faculty speakers.
Conclusion: NLM exhibits and associated events offer a viable means of bringing university and community members into the library and engaging them. Feedback throughout our series indicates that these events clearly had a positive impact on those who attended. In our case, the success of events was contingent on collaboration with our talented faculty, partial funding from several disparate organizations, and the use of a detailed yet flexible marketing plan.

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Library Instruction Integrated into the Veterinary Pharmacy Course: Same Old Key Players, New Techniques
Mariana Lapidus, Associate Professor and Reference and Instructional Librarian, Library and Learning Resources; **Michelle Ceresia,** Associate Professor, Department of Pharmacy Practice; **Jennifer Irizzary,** Adjunct Faculty, Department of Pharmacy Practice; Massachusetts College of Pharmacy and Health Sciences–Boston
Objectives:• To introduce the implementation and development of the new teaching methodology used in a library instruction class integrated into a veterinary pharmacy elective course at the Massachusetts College of Pharmacy and Health Sciences.
• To demonstrate that engaging pharmacy students in an active learning process utilizing case scenarios and group exercises represents an innovative and effective approach for course content delivering.
Methods: This study statistically assessed the effectiveness of course-integrated library instruction and hands-on group exercises in teaching information literacy and web searching skills to the undergraduate pharmacy students during the last two years (2011–2012). The effectiveness of class design and delivery methods was measured based on the results of pre- and post-surveys, which will include such criteria as students' knowledge of veterinary pharmacy print and electronic resources prior and after the instruction, usefulness of hands-on group exercises utilizing library databases, etc.
Results: Surveys reported a high level of pharmacy students' satisfaction with the new teaching methodology as well as their positive educational experience. Students reported that their knowledge of print and online veterinary resources significantly improved. The majority of participants agreed that hands-on group exercises facilitated by the librarian served as an effective method of learning in this course.
Conclusions: Pharmacy faculty collaboration with librarians leading to the creative use of group hands-on exercises served as an effective method of providing information literacy instruction for students enrolled in the veterinary pharmacy course. This approach could be effectively used in academia as an engaging method of providing high-quality instruction in similar courses, maximizing students' satisfaction and guaranteeing a high retention level of information learned in class. It can also be successfully applied in various institutions to expand the educational role of librarians and emphasize faculty collaboration across different departments and disciplines.

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Library Support of an Academic Medical Center's Newly Established Hospice and Palliative Medicine Fellowship: A Case Study
Anca Meret, Reference Librarian; **Konstantina Matsoukas,** Head, Reference, and Education Coordinator; **Nighat Ispahany,** Reference and Media Collections Librarian; **Marina Chilov,** Reference and Monographs Collection Development Librarian; Augustus C. Long Health Sciences Library, Columbia University, New York, NY; **John M. Saroyan,** Assistant Professor, Pediatric Pain Management and Palliative Care, Anesthesiology and Pediatrics, and Director, Hospice and Palliative Medicine Fellowship Program, College of Physicians and Surgeons, Columbia University Medical Center, New York, NY
Objectives: To describe a blueprint (born from the collaboration between academic medical librarians and a pain medicine and palliative care clinician/specialist) for ongoing library support of a newly established Hospice and Palliative Care Medicine (HPM) Fellowship.
Methods: Librarians began by educating themselves about the HPM subspecialty (meetings/exchanges with a key HPM faculty member, attendance at seminars open to the medical center community, and comprehensive searches to identify the body of knowledge/literature relevant to palliative care). Next, the library's collections were explored to expose palliative care resource strengths and gaps. Based on this audit, librarians involved with collection development identified vendors, publishers, and resources to consider. Continuous consultation with the key faculty member resulted in the limited (by library budget) yet appropriately selected addition of new content to the library's palliative care offerings. Last, a library/research training program was planned (again with extensive input from the fellowship program director), implemented, and evaluated (three question survey) to ensure that the HPM Fellows were made well aware of the available library resources.
Results: Collection Development: In 2010/2011, the library's monographs collection development librarian actively bought all quality print and electronic books of relevance to HPM encountered via book approval plans and special notifications. Books in electronic format were favored over print, with the majority of e-book titles coming from Oxford University Press and Lippincott, Williams & Wilkins. Some titles made it into the e-book collection as part of larger packages acquired by the library. No new serial titles were added to the collection, while four DVDs were purchased by the media/audio visual collections librarian. Already subscribed to media/AV collections with relevant HPM content included: the Network For Continuing Medical Education (NCME) videos or NCME TV online video library, the AudioDigest audio CD subscription service, and the Henry Stewart Talks online video library. Training Program: Four hours of training, divided into two sessions, were offered: (1) the first session focusing on searching health sciences information resources and evidence-based practice and (2) the second focusing on searching for information in HPM-relevant disciplines beyond medicine (humanities, social sciences, religion, music, etc.). Classes included a mix of hands-on exercises (four search scenarios per session for fellows to work on), as well as plenty of discussion and live demos of available resources. Post-class survey results indicated that both HPM Fellows found the sessions helpful and felt that their confidence in finding information had increased as a result of the training.
Conclusions: Fostering extensive collaborations of this type benefits all involved in numerous ways. For librarians, working so closely with faculty leads to better collection development

decision making and a better understanding of the resource and training needs of their constituents. In the case of HPM specifically, it being such a cross-disciplinary specialty that reaches into areas often not well known to physicians, librarians can play a vital role in helping to highlight valuable resources that can otherwise be too easily overlooked.

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Life without a Subscription Agent

Douglas M. Shane, Acquisitions Librarian; **Ann Marie Clark,** Library Director; Arnold Library, Fred Hutchinson Cancer Research Center, Seattle, WA

Objectives: With rising costs and shrinking budgets, implementing cost-cutting measures has become the norm for many libraries. In 2009, our library canceled its subscription agent services and assumed responsibility for subscription-based activities. In so doing, we were able reduce our costs, gain greater control over our subscriptions, and provide better service to our patrons.

Methods: We are a small library entrenched in a larger research institute serving close to 3,000 patrons, which include research scientists, clinicians, students, and support staff. Our collection consists of over 27,000 electronic journals as well as print and e-books. By handling subscriptions ourselves, we now work directly with vendors to process orders, issue payments, renew subscriptions, and set up access. While the elimination of the subscription agent fee was a motivating factor, we have realized other benefits from going it alone.

Results: We were able to cancel all of our print journals and have used the savings to expand our electronic journal collection. With no middleman, we are able to troubleshoot issues in a more efficient and timely manner to ensure access interruptions are minimized. We have gained a greater insight in to our collection and are able to better address deficiencies.

Conclusions: While this solution might not work for every library, especially for libraries that do not have the staff to take on the added responsibilities, our library has been able to provide better service and more content to our patrons in an economical efficient manner.

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Literacy Program for the Students before Enrollment at a Graduate School

Kuniko Sato, Librarian, Library, St. Luke, Tokyo, Japan

Objectives: To reduce anxiety of new graduate students and librarian's workload at the beginning of the semester. Graduate students begin their research as soon as the semester begins. But some students are not familiar with literature searches using databases. Also, some students feel anxiety to begin their research at the new information environment.

Methods: Pilot literacy program was provided to the students before their enrollment at the graduate school to see its effect. College librarians prepared three classes. Two classes to give a knowledge of basic searching skill using popular literature databases and to let students know about the service of the library. One class is for discussion. The program was held at the research center of the college. The program was open to the people who are interested in nursing research or those newly admitted to the graduate school.

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Mapping the Health Economics Literature

Helen Look, Collection Analyst, Health Sciences Libraries, University of Michigan–Ann Arbor

Objectives: To identify and analyze the health economics literature as part of an overall research project to map the public health literature. The purpose of the study is to determine the core journals used in health economics, the currency of cited references used in the literature, and the online databases that provide the greatest coverage for the cited journal references.

Methods: Following the protocol set by the Public Health Mapping Project, the researchers selected three health economics journals as source titles. These titles are *Health Economics, Inquiry,* and *Journal of Health Economics.* All 70 issues of these journals published from 2008–2010 were manually reviewed, yielding 645 citing articles and 22,895 cited items. A random sample of 1,020 items drawn from the overall pool of cited items served as the data source used to identify the most frequently cited publication types (book, government document, journal article, and miscellaneous) and their age at time of citation. A second sample of 1,002 items drawn from the 16,442 cited articles was the source for identifying the most cited journal titles and the breadth of journals consulted in health economics research. The cited journal titles were sorted into three zones based on Bradford's Law of Scattering. The top journals were subsequently checked for coverage in major databases.

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Meeting Community Health Information Needs through Print and Electronic Collections at a Public Library

Carlene Chiu, Student, Certificate of Advanced Study in Health Science Librarianship, University of Pittsburgh, Pittsburgh, PA

Objectives: Objective: This project examines if a public library is meeting the health information needs of its library patrons and community members through its print and electronic health collections. The result of this investigation will determine if any adjustments need to be made to the collections pertaining to additions, deletions, and budget allocation to print and electronic health resources. The goal of this investigation is for Altadena Public Library to better meet the health information needs of its constituents.

Methods: Statistics were collected and analyzed from government resources to determine the demographical profile of the community. Statistics pertaining to circulation, collection currency, and subject matter of the print and electronic health collections were collected and analyzed to determine usage in relation to supply and demand. Reference questions received at the reference desk were tallied for three months to examine need for health information. After the statistics have been analyzed, the collections librarian was interviewed about the developments.

Results: Community Characteristics: Census information reveals, that from 2000–2010, there has been a 6.2% decrease of people under the age of 14 and a 4.8% increase in people over the age of 60 in Altadena, CA. There has been a 0.3% increase of females (51.2%) and a subsequent 0.3% decrease in males (41.8%) between 2000–2010 in Altadena, CA. Since 2000, there has been a 5.5% increase in the Hispanic/Latin population which is the second largest racial group after the white population (52.8%) in Altadena, CA. The next largest group is black/African American at 23.7%, decreasing 7.7% since 2000. The Altadena popula-

tion is obtaining more education with an increase of 9.9% of the population receiving some college education (79.3%) and an increase of 13.7% graduating high school (29%). The Altadena population is also earning more in 2010 than in 2000. A majority of the population (71.5%) earn more than $50,000 a year, up 13.3% from 2000. Twenty-eight and a half percent earn less than $50,000. Print Collection: The print health sciences collection in 2011 accounted for 1.1% of the library's circulation. The highest nonfiction sections circulate between 1.3%-0.06%. While circulation went down 0.1% from 2010 to 2011; from 2011 to 2012, there is a 0.2% increase. There are 2,508 books in the health sciences collection that are classified using the Dewey decimal system, 610–619. Books about diseases (616) compose 36% of the collection, followed by the promotion of health (613) at 19% and gynecology and other medical specialties at 12%. The collection holdings are current with 38% of the collection published between 2006–2010, 41% published between 2001–2005, and 8% published between 1991–1995. A total of 22 questions pertaining to health sciences were received in 3 months (October 2011–January 2011), in person, at the reference desk. Seventeen of the questions were answered using library print resources, 3 were answered using the Internet, and 2 questions were answered using both the Internet and library print resources. Electronic collection: The library subscribes to Gale's Health and Wellness database that is offered through the library's website. At the library, log in is not required. Remote access requires a library card. The library started offering the database to the users in 2006. Statistics were not available for 2006 and 2007. In 2008, the database was used 161 times. In 2009, usage increased 47% (1,235 sessions) but decreased 9% in 2010 to 984 sessions. In 2011, usage decreased 29% to 225 sessions. Each session for each year resulted in approximately 3 searches. Access from the library has been significantly higher than remote access from 2008–2009. From 2009–2011, there has been a decrease in library access although usage was still higher than remote access. From 2010 to 2011 there has been a slight increase in remote usage.
Conclusions: Altadena Public Library is currently meeting the health sciences information needs of the community through its print and electronic resources. Circulation statistics indicate the health sciences collection is circulating well compared to the other nonfiction sections. The health sciences is well maintained with current titles added monthly and weeded every other year. The librarian consults *Library Journal* and publisher's sources as to what title to add. The librarian also takes patrons' request into consideration. Titles are relatively recent. Reference questions were answered using ready reference sources and through book resources at the library. The subjects with the largest holdings—diseases, promotion of health, and gynecology and other medical specialties—reflect the aging population and growing number of females in Altadena. The library has a small Spanish nonfiction collection that contains a few health sciences titles. The growing Latin population indicates Spanish health sciences titles should be added. The librarian states that the health sciences collection's budget is determined by circulation, but the number of holdings may also influence circulation. There has been a decline in usage of the health sciences database. Usage peaked in 2009 and has gone done since then. In the past, patrons have accessed the database from the library. The slight increase in remote access from 2010–2011 indicates that usage is shifting from the library to remote access. Overall, usage has decreased significantly. The library may consider better promoting the database to get more people to use it. If not enough people use the online database, the library may eliminate it in the future.

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Moving Trainees up to the Major Leagues: Residents and Interns on Your Team
Anne Seymour, Associate Director; **Barbara Kountouzi,** Coordinator, Education and Media Services; **Hope Lappen,** Science Resident; **Carlos Rodriguez,** Acting Head, Access and Document Delivery Services; **Ginny Brown,** Library Intern; **Ryan Cohen,** Library Intern; **Gerard Regan,** Library Intern; Biomedical Library, University of Pennsylvania–Philadelphia; **Dineo Ketshogileng,** Senior Health Sciences Librarian, Library, University of Botswana, Gaborone, Botswana
Objectives: Describe the internship and residency programs in the health sciences libraries of a large research university. Assess the highlights and benefits of internships to both interns and the institution as well as identify areas for improvement.
Methods: A large research library's internship program for master's-level students in library and information science will be described focusing on the programs at the health sciences libraries. Other initiatives will also be described: summer internship for high school students, a six-month internship for a librarian from a partner institution outside the United States, and a two-year science librarian residency program. Current and former interns from the last ten years will be surveyed. Employment post-internship will be tracked. Respondents will be asked to evaluate the internship experience and describe how the internship shaped their career goals and prepared them for their first and subsequent positions. The survey will ask for highlights of the internship and input on what was missing from the experience and what could have been done better. Plans for implementing changes and additions to the programs will be presented.

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Negotiating Your License
Trey Lemley, AHIP, Information Services Librarian; **Robert M. Britton, AHIP,** Electronic Resources/Collection Development Librarian; **Jie Li, AHIP,** Assistant Director, Collection Management; Charles M. Baugh Biomedical Library, University of South Alabama–Mobile
Objectives: The objective of this poster is to describe a procedural framework used by an academic medical center library for negotiating licensing agreements with vendors of electronic resources.
Methods: Libraries spend an ever-increasing amount of money every year on library materials: recent data indicate that the average Association of Research Libraries university library now spends over half of its materials budget on electronic resources. Since vendors will not allow libraries to access these digital resources without entering into a contractually binding license agreement with the vendor, it is incumbent upon libraries to develop carefully prepared guidelines to be used when negotiating licenses to help ensure that all major issues are addressed before becoming a signatory to a license agreement. This poster will describe in detail the framework used by our library, along with the issues intended to be addressed by the framework.

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Open Access versus Traditional Journals: Comparing Measurement of Impact in the Health Sciences Literature over Time

Mary Shultz, AHIP, Regional Head Librarian, Library of the Health Sciences-Urbana, University of Illinois–Chicago, Urbana/Champaign, IL; **Sandra L. De Groote, AHIP,** Scholarly Communication Librarian, Daley Library, University of Illinois–Chicago; **Emilie Vrbancic,** Graduate Assistant, Library of the Health Sciences-Urbana, University of Illinois–Chicago, Urbana/Champaign, IL

Objectives: The open access (OA) movement calls for unrestricted access and unrestricted reuse of scholarly research. As the movement continues, the number of OA journals has increased. This project compares: (1) the impact of OA journals versus the more traditional fee-based journal and (2) the various tools available for measuring the impact of a journal.

Methods: A list of online journals was acquired by searching the Scimago system. The searches were limited to the subjects of medicine-internal medicine, medicine-surgery, and dentistry. Each journal in the list was reviewed to determine if it was an OA title. This was accomplished by searching the Directory of Open Access Journals (DOAJ). The resulting list of Scimago journals was then divided into traditional journals and OA journals. The following data for each title was collected for the years 2000, 2005, and 2010: ISI Journal Citation Reports (JCR): presence in JCR; impact factor; cited half-life; total cites; SciMago: journal ranking; H-index; quartile; total cites; Harzing's Publish or Perish: H-Index; total cites. The results were aggregated to determine differences in impact between OA and traditional journals. A further comparison of the various tools of measurement was also conducted.

Results: The tools used (JCR and Scimago) were difficult to compare for a number of reasons. It was found that there is little overlap in journals between JCR and SciMago; JCR contains few OA journals titles; and both systems collect some of the same data but not necessarily over the same span of time. Overall, the preliminary results show that both the OA and traditional journals analyzed had consistent increases in the Scimago Journal Rank indicator (SJR), the number of articles published, and the times cited between the years 2000 and 2010. OA journals increased in all of these categories at a much greater rate than traditional journals. For example, in the immunology titles studied, the OA journals increased in SJR by 402% and in times cited by 598%, while the traditional journals increased 74% and 130%, respectively. This was also the case in dentistry titles where the SJR increased for OA titles by 121%, while the traditional titles increased 21%.

Conclusion: Initial results show that OA journals may be increasing in impact at a faster rate than traditional journals. Further investigation is needed to determine if there were confounding factors that influenced the results.

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Pitching in: Involvement in Medical School Committees to Build Library Partnerships

Caroline Harzewski, Medical Librarian, Louis Stokes Health Sciences Library, Howard University, Washington, DC

Objective: Librarians support the mission of their medical school by building professional relationships with faculty and students. By participating in committees that influence decision making, librarians can be indispensable players who cultivate communication between the library and academic departments. This study demonstrates how a newly hired liaison librarian joined four medical school committees in the first six months at the university.

Methods: Medical school committees are a team of key faculty members, department heads, and students. Librarians who participate in these committees can both pinch hit and take the lead on projects and issues tackled during meetings. Discussed is the liaison librarian being invited to serve on the curriculum committee of the medical school and the subsequent opportunities that resulted from this involvement. By contributing to the committee, the liaison librarian was invited to serve on the professionalism, orientation, and health information technology committees. To open up new opportunities for the library, the importance of active participation and sharing of ideas was emphasized. The liaison librarian contributed to policy building, research, exam methods, and other initiatives affecting students and faculty. An analysis of communication was conducted to determine how effective these collaborations were.

Results: The results showed the formation of partnerships that enhanced both the goals of the school and library, an increase in requests to help with research initiatives, an invitation to join the medical school faculty for small group facilitation, an increase in the use of online resources such as databases and LibGuides, and an increased awareness of library services and future library initiatives.

Conclusions: Partnerships formed with faculty, students, and administration can help the library to be a key player in the medical school, its curriculum, and any challenge that can benefit from collaboration. Meetings can be tedious and challenging since the librarian is not directly part of the medical school and is working with members who have more advanced degrees; however, this outside perspective brings welcome advantages to the groups. By contributing to committees, librarians can build partnerships from which they can build skill sets and grow professionally.

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Publication Data: Growing Opportunities

Virginia R. M. Carden, AHIP, Administrative Research Librarian; **Patricia L. Thibodeau, AHIP, FMLA,** Associate Dean; Medical Center Library & Archives, Duke University, Durham, NC

Objectives: Tracking citations of author publications has become an important activity for institutions. Departments, institutes, and centers are exploring creative ways of using library-generated data, through complex searches of citation databases, to showcase productivity, grant output, and publications in premier journals. Analysis of citations can also be used to generate discussions of priorities and resource allocation with faculty and administrators.

Methods: Web of Science provides an opportunity for the library to track the institutional output by providing author address information for all authors of a publication, allowing for more detailed analysis. By reviewing and tagging the citations, the library has created EndNote libraries categorized by departments, divisions, and centers. These libraries of faculty publications are now being entered into departmental databases and placed in web-based and mobile applications, to be shared with decision makers and used to promote the research and work of the faculty.

Results: Medical center departments are using the data for a variety of administrative purposes. One group has built an intranet application that helps track their subject strengths and allows the chair immediate access to citations. Some departments use the data for faculty productivity measures, especially developing research portfolio and tracking the focus of their research projects. Other uses of the data include creating a faculty publication list, administrative reports, faculty information for websites, presentations, and metrics for their site-based research units.

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Reaching out to an Underserved Academic Community: Focus Groups with Postdoctoral Researchers

Aileen McCrillis, Research Librarian; **Alisa Surkis,** Translational Science Librarian; NYU Health Sciences Libraries, New York University–New York; **Pauline S. Beam,** Information and Education Services Librarian, Gustave L. and Janet W. Levy Library, Mount Sinai School of Medicine, New York, NY; **Dorice Vieira,** Clinical Librarian, NYU Health Sciences Libraries, New York University–New York; **Tina O'Grady,** Doctoral Candidate, Department of Biomedical Sciences, Tulane University, New Orleans, LA

Objectives: Postdoctoral researchers (postdocs) are a critical component of the academic research community but, as neither students nor faculty, are often overlooked by libraries. We conducted three postdoc focus groups at two institutions, with the aims of informing the content of a national postdoc survey and of assessing how we could better meet the needs of this population at our institutions.

Methods: The authors held three one-hour focus groups at two institutions to evaluate the current library usage and information needs of postdocs. Focus groups were recruited through targeted emails, fliers, and institutional postdoc email discussion lists. A series of questions was developed to guide the focus groups through areas of interest. Discussions were recorded both by an audio recorder and by written notes. Our analysis focused on both the unmet needs in our institutions in order to gain insight into how to better serve those needs and on the commonalities and differences between the institutions in order to develop themes and questions for a national survey of postdocs.

Results: Some common themes emerged from the focus groups, as well as some issues that were more institution specific. At one institution, postdocs were unaware of many library services, such as document delivery and off-site access. The issue of data management also arose, and there was a lack of consistency and knowledge about best practices in this area. At the other institution, lack of topic-specific guidance to library resources was cited as an issue. What was clear from the focus groups at both institutions was a strong need for assistance with statistics and statistics programs, as well as with bioinformatics databases and tools.

Conclusions: We determined that statistics, bioinformatics, and data management were important topics to include in a national survey of postdocs, as well as to explore at our own institutions. The results also informed survey questions regarding the use and awareness of traditional library services and our own institutional responses in this area.

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Results of the Value of Health Library and Information Services Study

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Objectives: The objective of the study was to understand the value and impact of information resources and services provided by the library and the librarian on patient care. The research updates and replicates the approach taken in the well-known Rochester Study (Bull Med Lib Assoc. 1992 Apr:70(2):169–78). Community-based collaborative research methods were used to plan and conduct the study.

Methods: Mixed methods (focus groups, an online survey of physicians, residents and nurses in 118 hospitals, and interviews with selected health professionals) were used to gather data on the perceived value and impact of library-provided information resources and services. The study was a partnership of National Network of Libraries of Medicine, Middle Atlantic Region, and University of North Carolina-Chapel Hill. Additional funding was provided by various sections and chapters of MLA and other library organizations. Data were gathered on changes in clinical care that resulted from the use of information resources, time saved, and adverse events avoided. Extensive data were collected on the library resources and access points used by health professionals such as the library website, Google, the electronic medical record, mobile devices, and the physical library. The study is expected to generate substantial evidence regarding the impact of the library on clinical decision making.

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Search Like a Doctor: Daily Library Evidence-Based Medicine Search Tutorials Based on Morning Report Cases

Mary Beth Simiele, AHIP, Librarian, Virginia Mason Medical Library; **Christine Palermo,** Chief Medical Resident, Graduate Medical Education; Virginia Mason Medical Center, Seattle, WA

Objectives: The purpose of this project is to assess the value of the librarian within an evidence-based medicine curriculum targeted toward Virginia Mason Medical Center's internal medicine residents and interns.

Methods: The Library has partnered with Graduate Medical Education to create an EBM curriculum for Virginia Mason' internal medicine residents using morning report as the catalyst. Residents learn the standard process for presenting a clinical case, work as a team to create a differential diagnosis, and develop a relevant clinical question using patient/problem, intervention, comparison, outcome (PICO). Each day, one resident is tasked with searching the literature, appraising an article, and presenting the answer to the clinical question at the next meeting. The resident who is assigned the question meets with both the librarian and chief medicine resident for an individual evidence-based medicine (EBM)/PICO tutorial. The resident is given an overview of EBM principles and is instructed on creating a clinically relevant search strategy and identifying and locating an article with high-level evidence. A SurveyMonkey survey was distributed to the internal medicine residents in order to measure whether our desired outcomes were met. We received a response rate of 42%.

Results: Survey responses indicated overwhelming satisfaction with the addition of the librarian to morning report and the use of the PICO model for the discussion of all clinical cases. Respondents reported an increased comfort level with the 5 As

of evidence-based medicine as well as an increased confidence in using PubMed to answer clinical questions. Fifty-seven percent reported a change in searching techniques (using Medical Subject Headings, Clinical Queries, etc.) as a direct result of the daily search tutorials. One hundred percent of the residents reported the participation of the librarian in morning report and one-to-one search instruction added value to the EBM curriculum. Fifty-seven percent reported an increase use in the library's resources as a direct result of this collaborative project.
Conclusion: The participation of the librarian in morning report increased the residents' proficiency in EBM and literature searching. The favorable survey responses have also lead to an expansion of the program to include hospital report three times a week. Hospital report consists of the presentation of a current inpatient case, the formulation of related clinical questions, and real-time literature searching by the librarian to assist in discovering the answers. The librarian's involvement was specifically requested by the residents for this additional educational opportunity. This spring Accreditation Council for Graduate Medical Education approved the daily PICOs presented by the residents for application toward their case-based learning objectives. This was an unanticipated benefit of the new morning report structure.

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Smartphone Use at a Health Sciences Center

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Objectives: This poster reports the results of a survey conducted by librarians and information technology (IT) specialists to learn if our patrons use smartphones to perform clinical, research, or instructional tasks; what applications are used; what tasks people would like to perform on their smartphones; and how the library could support smartphone use in the health science center.
Methods: Questions were developed to capture respondent demographics, current and future planned smartphone ownership, apps used in their work (clinical, research, instruction), future needs, and the library's role. The 13-question survey was built in SurveyMonkey and administered over email from November through December, 2010. The survey was also linked to the health science center library's home page. The survey was sent to 9,410 faculty, students, staff, residents, and post-doctoral researchers of the six colleges (dentistry, medicine, nursing, pharmacy, public health and health professions, and veterinary medicine) of the health sciences center. A total of 432 patrons participated in the survey, for a response rate of 4.59%. Objective survey responses were subjected to basic summary statistics. Open-ended responses were categorized into themes related to current uses, wanted uses, library support, and named products as appropriate.
Results: Participants' responses demonstrate the breadth of uses our patrons are finding for their smartphones. When asked what mobile apps they use for their clinical, research, and instructional duties, respondents listed 130 specific apps or products. Most respondents (95.1%) said they would use a customized menu of evaluated mobile apps. When discussing how they would like to be able to use their smartphones, respondents primarily mentioned clinical, administrative, and library-related tasks. Respondents identified many ways the library could support their smartphone use including facilitating access to literature databases, creating a mobile-friendly version of the library's website, and improving connectivity.
Conclusions: There are several new roles and new possibilities for librarians suggested by the survey responses. These include developing and marketing new and existing resources, technical support for smartphones, advocacy for patrons (particularly related to connectivity and accessibility), evaluation of relevant apps, and patron education. The survey provided the authors with a rich source of data, not only about the patrons themselves, but how they use their smartphones on a daily basis. It is clear that our patrons see a role for the library in furthering this endeavor.

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The Game Plan: Databases, Mobile Applications, and Social Media for Disasters and Emergencies

Joe Swanson Jr., Interim Director; **Mary L. White,** Library Technical Assistant; **Terrence W. Redd,** Administrative Assistant; **Jerrold L. Mobley,** Library Technical Assistant; **Tara Douglas-Williams,** Manager, Information Services; **Roland Bernard Welmaker,** Archivist, Librarian, and Instructor; Library, Morehouse School of Medicine, Atlanta, GA
Objectives: To create an exhibit that would illustrate disasters that have occurred, provide a static glimpse of reliable resources and tools to ameliorate disasters, and use in conjunction with library staff to provide hands-on experiences in using pertinent databases and mobile apps.
Methods: Morehouse School of Medicine (MSM) annually sets aside a day, Ricardo Rivers Multicultural Fun (Arts), where the community greets each other, shares cultural experiences, provides information about departmental projects, and participates in a health fair. As part of the departmental sharing and the health fair, MSM Library staff, using a three-foot-by-six-foot poster, exhibited various library resources available for use to prepare for disasters and emergencies. Attendees were given bags (Complete your Emergency Disaster Bag). Library staff also demonstrated the use of the various databases and mobile apps for use with smart phones (i.e., Blackberries, iPads, etc.). Databases from MedlinePlus, Centers for Disease Control and Prevention and Ready.gov were demonstrated.

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The Next Generation of Curated Websites from the National Library of Medicine's History of Medicine Division

Julie M. Adamo, Associate Fellow, National Library of Medicine, Welch Medical Library, Johns Hopkins University, Baltimore, MD

Objectives: The National Library of Medicine's (NLM's) History of Medicine Division (HMD) seeks to find new ways to expose digital content on the web creatively and dynamically. The purposes of this project were to gather insight from NLM staff on how to improve and enrich digital programs, compile a list of functionalities for any potential web publishing platform to use in the creation of curated websites, and evaluate Omeka as a potential platform.

Methods: A series of thirteen interviews with HMD staff who contribute to digital programs were conducted. From these interviews, a list of desired functionalities for curated websites was developed and staff commentary was qualitatively analyzed and grouped into themes. Omeka's viability and usability were tested through the development of a proof-of-concept website using digital objects and content from the Cholera Online project.

Results: Thirty-two use cases, or functionalities, were generated from the interviews and categorized according to three levels of priority, with the most frequently described use cases receiving the highest priority ranking. Narrative descriptions of interviews were also created and are presented as four major themes: visions and ideas, limitations of current resources, importance of investing in digital programs, and thoughts on adopting Omeka or other new platform. A proof-of-concept website was developed using Omeka, and selected functionalities were tested.

Conclusions: This project has outlined a series of use cases and a collective vision for digital programs that can be used to evaluate web publishing products or to develop them in-house. While Omeka is very successful as a standalone tool and capable of meeting a majority of use cases, it did not reliably draw and display items from the Fedora-based Digital Collections repository (a primary requirement for HMD). As NLM's digitization program expands and users are increasingly turning to the web for library services, it has become exigent for NLM to find new ways to expose digital content. This project provides some primary building blocks that will enable this to happen.

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Using Multimedia to Become a Better Teacher: A Comparative Study of Prezi and PowerPoint

Bethany S. McGowan, Allied Health Sciences Librarian, Louis Stokes Health Sciences Library, Howard University, Washington, DC

Objectives: In the evolving profession of librarianship, taking innovative approaches to instructional design is an essential component of engaging an audience. Prezi has recently emerged as a dynamic presentation software in which its users explore ideas on a zoomable, virtual canvas. This case study will evaluate the successes and failings an academic medical librarian encountered when replacing PowerPoint presentations with Prezi presentations.

Methods: In this comparison study, the author critiques PowerPoint and Prezi software, evaluating usability challenges, costs, and audience reactions using the free academic version of Prezi and Microsoft PowerPoint 2010. Thirteen students were also given a five-question questionnaire to rate their response to presentations given using both platforms.

Results and Conclusions: Based on student response, cost effectiveness, and ease of incorporating technologies—videos, portable document format (PDF) files, and the ability to collaborate remotely in real-time—Prezi was the emerging leader. However, the learning curve for using Prezi is steeper than PowerPoint's.

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Using Targeted Marketing Strategies to Increase Library Use in the Health Sciences

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Objectives: The objective of this study is to increase use of library instruction tools in the health sciences programs of physical therapy, nursing, human performance and exercise science, health professions, and human ecology. Instruction tools include library instruction sessions, online class pages, and library handouts included with assignments.

Methods: Using a prospective cohort study approach, this poster will compare all library instruction activities for health sciences classes from fall and spring semesters of 2008 through 2012 including library instruction sessions, handouts, and class pages. The intervention will include individual emails to each of the teaching faculty highlighting various library services to complement following class criteria: previous instructor library use, previous library instruction for the course, online or classroom-based course, and advanced or basic course levels. The online course catalog and calendar of library instruction sessions was utilized to identify the 1500-level and research-based courses, classroom and online courses, and course instructor emails. Once all factors were identified, each course instructor was sent an email with corresponding suggestions for library instruction. Results are expected to show an increased use of all library instruction methods.

Results: There were 71 classes targeted for outreach during the fall 2011 semester and 41 classes targeted during the spring 2012 semester. Of the targeted classes, a total of 39 (54.9%) scheduled library instruction during fall semester and 18 (43.9%) during spring semester. The average library instruction sessions scheduled for the health sciences during fall semesters from 2008–2010 was 18 instruction sessions. The average library instruction sessions scheduled for the health sciences during spring semesters from 2008–2010 was 14 instruction sessions. These numbers show a total increase of 21 classes (46% increase) for fall semester and 12 classes (56% increase) for spring semester. There was also a noted increase in the variety of classes taught. Fall semesters from 2008–2010 showed an average of 12 different courses scheduling library instruction, and spring semesters showed an average of 7 different courses scheduling library instruction. After the targeted outreach, a total of 27 different courses during the fall semester and 14 during the spring semester scheduled library instruction.

Conclusions: The targeted outreach was effective for 51% of the classes that were selected for library instruction promotion. While only half of those targeted actually scheduled a library instruction session, the total number of health sciences library instruction sessions increased dramatically after the targeted outreach. A 50% increase in both the total number of health sciences

library instruction sessions and the variety of health sciences courses scheduling instruction sessions shows that the targeted outreach was successful in expanding the library's involvement in the health sciences curriculum. Challenges that arose from this experiment included some students receiving instruction multiple times during the same semester. Further exploration would include identifying courses in the curriculum that could progressively build on library instruction. Another challenge arose when instructors teaching the same course were not equally willing to include library instruction. This challenge may be further addressed by department-wide outreach to include library instruction as part of the required course curriculum.

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Utility Player: A New Role for Librarians as Animal Alternative Researchers

Adele Dobry, Health and Life Sciences Librarian, Louise M. Darling Biomedical Library, University of California–Los Angeles

Objectives: To show ways in which librarians can assist principal investigators and institutional animal care and use committees (IACUCs) with the research requirements as set forth in the new US Department of Agriculture (USDA) animal care policy #12. This newly revised policy requires principle investigators to submit a "search narrative," which explains the "search strategy" used to find possible alternate options to painful procedures.

Methods: The USDA animal care policy #12 was changed March 25, 2011. This poster will explain how this change impacts the animal research community and how opportunities are provided for librarians to assist researchers in meeting this revised information requirement. The investigator will utilize USDA animal care policy, relevant literature, web resources, and experience to illustrate techniques librarians can use to assist principal investigators and IACUCs in conducting thorough animal alternative research.

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Utilization of Evidence-Based Practice Resources by Junior-Level Nursing Students

M. Danet Lapiz Bluhm, Assistant Professor, School of Nursing; **Angela E. Myatt,** Liaison Librarian, Briscoe Library; **Christine S. Gaspard,** Head, Access Services and Interlibrary Loan, Briscoe Library; **Katherine A. Prentice, AHIP,** Head, Education and Information Services, Briscoe Library; University of Texas Health Science Center–San Antonio

Objectives: The aim of this research project was to increase utilization of evidence-based practice (EBP) resources by 25% among junior-level students at the school of nursing (SON) over a 3-month period in the spring semester.

Methods: Using a quality improvement model, librarians in collaboration with nursing faculty introduced an intervention that included an intensive library resources class and emphasized different methods of library access (mobile library services/Blackboard course content). Through the collaborative efforts of the nursing faculty and the librarians, these interventions were incorporated into the students' research course, which required the completion of an EBP research project resulting in a paper and poster presentation by students. This project innovatively utilized existing resources through the collaboration of faculty and librarians. By using quality improvement tools, improvement in student EBP knowledge was measured through surveys of self-reported utilization and satisfaction conducted at different time points during the course, i.e., before (pretest), mid-point, and following (posttest). Improvement measurement tools specifically utilized were a pareto diagram, fishbone diagram, and flow chart process mapping.

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Web-Scale Discovery in an Academic Medical Library: Our Experience with EBSCO's Discovery Service

JoLinda L. Thompson, AHIP, Technical Systems Coordinator; **Kathe S. Obrig,** Associate Director, Collection and Access Services; **Laura E. Abate,** Electronic Resources and Instructional Librarian; Himmelfarb Health Sciences Library, George Washington University, Washington, DC

Objectives: To determine if a highly tailored version of EBSCO's Discovery Service (EDS) aimed at an academic health sciences audience will be an appealing and effective tool for searching the library's collections and to compare its use to that of the current federated search tool.

Methods: Funds made available at the close of the 2010/11 fiscal year allowed purchase of EDS for a year-long trial. The appeal of this web-scale discovery product that offers a Google-like interface to library resources is counter-balanced by concerns about quality of search results in a medical setting and the challenges of configuring an interface that will serve the needs of a diverse group of library users. After initial configuration, library staff members tested the system internally. A focus group was held at conclusion of the internal trial period to identify issues and elicit feedback. The focus group participants determined that usability testing with library users should be done before moving forward with rollout to the user base. Usability testing with users representing the broad spectrum of students, staff, and faculty was conducted.

Results: Usability tests showed that EDS needs further work before being ready for release to library users. Of greatest concern are continuing issues, identified by user searches, with the relevance of items retrieved. Additional changes to the interface are in progress in the library or submitted to EBSCO as enhancement requests, including a more prominent English language limiter, a facet for medical reviews, reduction of subject facets offered to one, and removal of other facets that are irrelevant in a medical setting. User difficulties with navigating the interface are being addressed whenever possible to improve the search experience. Users indicated they preferred EDS over federated searching. EBSCO has worked with the library to better understand and identify problems and solutions. External roll-out to users is planned when outstanding issues have been satisfactorily addressed for effective use in a health sciences environment.

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A Game Plan for Assessing Resource Needs for Distance Education Students

Amy Honisett, Education Librarian, Spencer S. Eccles Health Sciences Library; **Jeanne M. LeBer, AHIP,** Associate Director, Education and Research, Spencer S. Eccles Health Sciences Library; **Liz Leckie,** Manager, Graduate Programs and Student Services, College of Nursing; **Alice Weber, AHIP,** InterProfes-

sional Education Librarian, Spencer S. Eccles Health Sciences Library; University of Utah–Salt Lake City
Objectives: As more students take classes online, this academic health sciences library wants to take the opportunity to determine what perceived gaps and what actual gaps exist in our service to distance education students. Assessment is the first step in changing our game to address the changing needs of our patrons.
Methods: This descriptive study includes survey questions related to the patrons' level of confidence in their abilities to access library services from off campus, how often they do so, how the patrons have contacted the library for help, and whether their need was met during that interaction and if not, why not. Finally, the survey asks the students for feedback on the workshops and tutorials the library offers in order to learn whether offering workshops remotely or during nontraditional hours (early morning, later in the evening, or on the weekend) would be perceived as valuable to distance education students and if online tutorials would be deemed useful as tools for learning. The study has received an internal review board exemption. The survey will be sent to an email discussion list for college of nursing students.
Results and Conclusions: This study uncovered areas in which the library can improve; there are both actual and perceived gaps in service to distance education students. Gaps in service can be addressed by enhancing the library's remote reference tools and self-paced tutorials and by developing remote workshops. Areas in which the survey indicates that patrons are not aware of services that the library offers can be addressed by more aggressively marketing those services.

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Going to Bat with Natural Standard
Helen-Ann Brown Epstein, AHIP, Clinical Librarian, Weill Cornell Medical Library, Weill Cornell Medical College, New York, NY
Objective: Demonstrate Natural Standard, the evidence-based authority on integrative medicine.
Methods: This is a demonstration of how a particular disease, such as Parkinson's disease is covered by Natural Standard. Results will be retrieved and assessed from the Foods, Herbs & Supplements, Health & Wellness, Comparative Effectiveness, Brand Names, Medical Conditions, Sports Medicine, Genomics & Proteomics, and Environment & Global Health databases. Results will be shown in paragraphs, bottom lines, and flashcards. A patient handout will be retrieved.
Results: Parkinson's disease was used as an example to demonstrate the variety of information available. Cowhage or mucuna pruriens was retrieved from the Food, Herb & Supplements, and Brand Names databases. Tai chi was retrieved from the Health & Wellness database. Parkinson's disease was retrieved from the Comparative Effectiveness database. Antiparkinsonian agents retrieved a small chart in the Chart & Tables database. Balance training was retrieved from the Sports Medicine database. Gene transfer was retrieved from the Genomics & Proteomics database, and pesticides was retrieved from the Environment & Global Health database. A patient handout on mucuna pruriens was retrieved.
Conclusion: The whole patient must be considered in quality patient care. Natural Standard with its variety of displays of succinct paragraph summaries with references, Bottom Line, and Flashcard displays is a valuable evidence-based resource to support integrative medicine for the health care provider and the patient. The Consumer and Patient Health Information Section of MLA endorses Natural Standard.

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Integrating the Library in Emergency Planning
Lauren H. Yaeger, Medical Librarian, St. Louis Children's Hospital; **Betsy Kelly,** Associate Director, Health Information Resources and Assessment and Evaluation Coordinator, National Network of Libraries of Medicine, MidContinental Region, Becker Medical Library, School of Medicine; Washington University in St. Louis, St. Louis, MO
Objectives: Emergency planning is a complex and ongoing effort in hospitals today. Significant resources are devoted to planning, practicing, educating, and promoting awareness of staff roles in the event of an emergency. The librarian posed two questions: how can the medical library support emergency preparedness and what do the library and librarian have to offer in the event of an emergency?
Methods: The librarian approached the safety and telecommunications manager and asked to join the next emergency preparedness committee meeting, requesting five minutes on the agenda to discuss integrating the medical library into the emergency plan. With support from a Regional Medical Library award, the librarian had emergency power, lights, and a power fail phone installed in the medical library; attended critical employee emergency preparedness (CEEP) training, participated in emergency drills; and bought laptops and rolling carts for mobile information access. A poster and bookmark were created to promote awareness.

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Using Quick Response (QR) Codes to Promote E-Books
Melissa A. Ratajeski, Reference Librarian, Health Sciences Library System, University of Pittsburgh, Pittsburgh, PA
Objectives: Over the past several years, the titles available in our e-book collection have grown to over 2000. To promote these titles and encourage e-book usage, quick response (QR) codes were posted among the library's onsite book collection.
Methods: QR codes were created using a uniform resource locator (URL) shortener, allowing link usage data to be recorded. The QR codes, when scanned, led users to a subject guide, listing e-books titles with links for direct access. For this pilot study, twenty-three codes were posted in the library's onsite print book collection, near the call number range of the corresponding topic. This strategic placement allowed patrons browsing the print collection to also browse the e-books available in their subject area. Because QR codes are a fairly new concept, education in the form of informational signage and a library newsletter article were provided.

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MLA '12 Abstracts

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MLA is a nonprofit, educational organization with more than 4,500 health sciences information professional members worldwide. Founded in 1898, MLA provides lifelong educational opportunities, supports a knowledgebase of health information research, and works with a global network of partners to promote the importance of quality information for improved health to the health care community and the public.

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