

Biomedical and Life Sciences Division

Poster Session:

Innovations and Best Practices in Biomedical and Life Sciences Libraries

Sunday June 3, 2007

7:45PM-9:30PM

1. **Alerting Our Patrons to Alerts: Helping Them Take the Next Step**

Dorothy Barr, Information Literacy Librarian, Lamar Soutter
Library, University of Massachusetts Medical School

No one questions the importance for both ourselves and our patrons of keeping up with new information. Many patrons have developed their own methods through the years, and may be reluctant to try new technologies. One of the ways librarians can assist is to stealthily introduce new methods by tailoring the technology to the individual. The poster will demonstrate several approaches, including weaning patrons from frequent checking of hard copies in the library; incorporating alerting options into various classes (e.g., introducing My NCBI into PubMed instruction; taking patrons an extra step to using RSS feeds; demonstrating saving searches and setting up alerts in various databases; etc.); and personalizing searches with alerting options (e.g., doing an author search for a patron's publications and adding email alerts). Alerts provide an effective way to emphasize our value as information specialists.

2. **Perceptions and use of evidence-based practice among practicing therapists**

Gary E. Kaplan, Information Services Librarian Scott Memorial
Library, Thomas Jefferson University

This poster reports on the information use of a non-traditional library user group: physical, occupational, and speech therapists practicing outside of our academic medical center. They are employees of other organizations, most of which do not have formal libraries. Because of geographic proximity, alumni status, or organizational affiliation they could make use of our library services. As part of a grant-funded project, Creating and Sustaining Environments for Evidence-Based

Practice (CASE for EBP), our team developed a survey and administered it to 37 people at three practice sites. The survey addresses familiarity, comfort, and attitudes about EBP; supports and barriers to EBP; and use frequencies of 14 information source categories (from academic education to textbooks to reimbursement considerations). The project team included occupational and physical therapy faculty and graduate students, an informationist (the author), and practicing therapists. The CASE for EBP project is based on the process of participatory action research (PAR), which empowers practitioners and researchers to work collaboratively to identify problems and develop solutions. The survey was part of the project's initial stage to identify supports and barriers to the use of EBP. My poster examines the information needs of practicing therapists as an important step towards tailoring library services to support their increased use of evidence in practice. This project was supported in part by Health Professions (BHPr), Health Resources and Services Administration (HRSA), Department of Health and Human Services (DHHS) under grant number 1 D37 HP05073-01-00.

3. **Health Promotion to the Under-Served - Mobile Health Units and Wireless Technology**

Mary J. Klatt, Associate Director, Loyola University Health Sciences Library

Susan Finn, Director, Loyola University Health System Mobile Health Unit

Loyola University of Chicago's Health Sciences Library received a grant from the National Library of Medicine to provide "on demand" health information to patients and families served by Loyola University Health System Mobile Health Unit (MHU). The MHU, which is part of the Ronald McDonald Children's Hospital of Loyola University Medical Center, is a children's clinic on wheels. The clinic is staffed by pediatric nurse specialists and is driven to Chicago-area communities to provide vital health care services including routine physicals, immunizations, asthma care, childhood disease prevention & education to medically underserved children ages 0-18. Six communities were chosen to participate in this project because of their population and socio-economic diversity. The focus of the project was two fold, education and technology. Through the NLM grant, the MHU was equipped with a new laptop computer, wireless technology, and printer. A two-year subscription to a wireless service was purchased for the MHU. The second phase of the project involved the training of nurse specialist and members of the community. The classes covered the basics of finding and evaluating health information on the Internet. This poster will illustrate how wireless access helps the nursing staff provide health information and works to enhance the MHU's mission of health promotion and prevention.

4. **Identifying Biomedical Publications Across the Institution**

Nancy Allmang, Research Librarian, Materials Science and Engineering Laboratory Liaison, Biosystems and Health Strategic Working Group Liaison, National Institute of Standards and Technology Information Services Division

In this era of electronic resources how can we make sure our users don't forget about other important services the library can provide? This poster describes how a reference librarian collaborated with a working group of multidisciplinary research staff to create a unique bibliography of over 1000 bio-related journal articles and conference papers published by NIST researchers over a period of 5 years.

Research in our agency is conducted in such scientific areas as chemistry, physics, materials science, electronics, metrology, information technology, manufacturing, and fire safety. No one unit works exclusively in the life sciences; rather, research in the biosciences occurs throughout. Individual authors publish bio as well as non-bio papers.

The multidisciplinary bio working group wanted us to cull papers in the biosciences from the larger body of NIST publications in order to highlight the bioscientific knowledge disseminated by the agency overall. The group worked with us to develop a comprehensive list of search terms to develop the list. The resultant 80-page bibliography was compiled using the Web of Science, MEDLINE, and IEEE Xplore databases as well as CSA Materials Research Database with METADEX.

Our users were not only appreciative but enthusiastic, and the bibliography has now itself been published.

5. **A new way to retrieve old critical information - TRAIL - Technical Report Archive and Image Library**

Patricia E. Kirkwood, Engineering and Mathematics Librarian, University of Arkansas Libraries

Daureen Nesdill, University of Utah

Biological weapons, atomic clock settings, and the effects of atomic testing -- old news that never dies. This is just part of the information that can be gleaned from technical report literature published prior to 1980. The Greater Western Library Alliance (GWLA) in association with the Center for Research Libraries (CRL) are working together to digitize important report series from this literature. A pilot database has been developed that includes important Atomic Energy Commission (AEC) reports as well as the National Bureau of Standards (NBS) monograph series. Our goal is to increase the number of technical reports available electronically. TRAIL will be an excellent resource for both historical

data as well as current access to the grey literature of science -- technical reports. Not only will access be improved and an archive insured, when this project gets approval from appropriate governmental institutions, perhaps some of the space used to house large paper, microfiche and microcard reports will be repurposed for electronic resources. Come discuss with us the pilot project as well as future trends in technical report literature.

The pilot database can be accessed at:
[tp://digicoll.manoa.hawaii.edu/techreports/index.php](http://digicoll.manoa.hawaii.edu/techreports/index.php)

6. **Exploring search engine overlap: implications for grey literature searching**

Lead Author: Shaila Mensinkai, Manager, Library & Information Services,
Canadian Agency for Drugs & Technologies in Health

Authors: Shaila Mensinkai, Andra Morrison, Kaitryn Campbell, Tammy Clifford,
Janet Joyce, Becky Skidmore

Background:

Internet search engines vary widely in retrieval yet one engine, Google™, has emerged as the dominant tool for web searching. CADTH Information Specialists rely largely on Google™ to identify web-based grey literature.

Objective(s):

To evaluate differences in top search results across leading search engines and to determine the impact of searching only Google™ for CADTH publications.

Methods:

Using the Thumbshots ranking tool, CADTH IS selected different search engines, highlighted HTA sites and ran grey literature searches against Google™ from January to July 2006. Overlapping and unique results and HTA site ranking for each search were recorded. Reference Manager was used to track source search engines for selected citations. Bibliographies in final publications were examined, and results tabulated using SPSS software.

Results:

Google™ provided 100 hits on a given topic 83% of the time versus 50% by others. There was no significant difference between Google™ and other search engines in total links provided ($p=.719$). There was very low overlap in the top results between search engines (mean=17.4). The percentage of unique links in Yahoo was higher (80%) than Google (78.5%). One third of researcher selected links for final bibliography came from other search engines. The highlighted HTA site was retrieved in one search.

Conclusions:

Different search engines give different search results. In this study, one third of cited citations came from search results by search engines other than Google™. HTA sites ranked poorly in the top results. To ensure comprehensiveness, it is

necessary to use multiple search engines and to devise separate strategies for searching HTA sites.

7. **Protein Tools for Viral Research**

Pamela Shaw, Biosciences Librarian, Galter Health Sciences Library, Northwestern University, Feinberg School of Medicine

The most common question asked by viral researchers of the bioinformatics specialist librarian at Northwestern's Feinberg School of Medicine is "How can I tell what my protein looks like?" This question occasionally is asked by principal investigators, but most often comes from post-doctoral fellows and graduate students. Most bioinformatics specialists know this is a loaded question: there are no perfect predictors of protein structure.

The Galter Health Sciences Bioinformatics Librarian, while working in partnership with viral investigators from three labs, has developed a list of recommended protein prediction tools and references. These tools provide a starting point for choosing the best sites for viral linker mutation studies.

The investigator is guided to the PHD tool at the PredictProtein site:

<http://www.predictprotein.org/> which has been cited by researchers in the *Journal of Virology* for prediction of structural elements in viral entry glycoproteins [1].

The structural features predicted by PHD provide good guidelines for finding loops in proteins suitable for linker mutations without disruption of major structural features.

After these steps, if the investigator wishes to create a predicted view of the protein in question, s/he is directed toward Rensselaer Polytechnic Institute's HMMSTR/Rosetta Server at <http://www.bioinfo.rpi.edu/~bystrc/hmmstr/>, which uses Hidden Markov Model (HMMSTR) and a Monte Carlo Fragment Insertion protein folding program (Rosetta) to return a set of coordinates in Protein Data Bank format. These PDB coordinates can then be loaded into the University of Illinois' Virtual Molecular Dynamics software for a number of lowest energy structure predictions.

Citation: Li, W., T.J. Minova-Foster, D.D. Norton, and M.I. Muggeridge. 2006. Identification of functional domains in herpes simplex virus 2 glycoprotein B. *Journal of Virology* 80(8): 3792-3800.

8. **Identifying the Impact of Failure in the Information and Knowledge Transfer Process**

Lorri Zipperer and Linda Williams - co-submitters

Lorri Zipperer, Cybrarian, Zipperer Project Management

The model presented will illustrate the viability of the VA National Center for Patient Safety's Healthcare Failure Mode Effects Analysis (HFMEA) as a tool to identify likely failure points present in secondary information and knowledge identification activity currently installed in the clinical environment (1). This human factors viewpoint will inform the discussion of the process and help identify the potential pitfalls and repercussions of the failures inherent in current practice. Research from the field will also be utilized to augment further examples of possible process breakdowns to be considered (2). In addition, practitioner expertise will provide illustrative solutions for decreasing the likelihood of common and/or dangerous errors and gaps in the information delivery and knowledge transfer process.

BACKGROUND

Increased awareness of the key role appropriate information plays in safe patient care came about after the death of an asthma study volunteer at Johns Hopkins University, a tragedy that occurred in part because of a lack of complete literature review by the research team (3). Other weaknesses in the process have recently been uncovered through review and comparison of results of the standard behavior of collegial transfer of knowledge to share current evidence (4).

The co-submitters see this application of HFMEA as a tool to demonstrate the critical impact of information and knowledge transfer on the reliability of professional decision making. They see that this area of failure analysis will demonstrate a need for team configuration for research and patient safety initiatives that include individuals with expertise in knowledge transfer and information identification and acquisition to minimize opportunities for failure (5).

References

1. DeRosier J, Stalhandske E, Bagian JP, Nudell T. Using health care Failure Mode and Effect Analysis: the VA National Center for Patient Safety's prospective risk analysis system. *Jt Comm J Qual Improv.* 2002;28:248-267, 209.
2. Zipperer L, Sykes J. The role of librarians in patient safety: gaps and strengths in the current culture. *J Med Libr Assoc.* 2004;92:498-500.
3. McLellan F. 1966 and all that-when is a literature search done? *Lancet.* 2001; 358:646.
4. Schaafsma F, Verbeek J, Hulshof C, van Dijk F. Caution required when relying on a colleague's advice; a comparison between professional advice and evidence from the literature. *BMC Health Serv Res.* 2005 Aug 31;5:59.
5. Steinbrook R. Searching for the right search – reaching for the medical literature. *N Engl J Med.* 2006;354;4-7.

9. **Health-E Illinois, a Go-Local Project**

Tom Bartenfelder, Research Services Librarian, Loyola University Health Sciences Library

Loyola University of Chicago's Health Sciences Library received a grant from the National Library of Medicine to populate an online, searchable database of health

service providers in Illinois. This database, "Health-E Illinois", is part of the Go-Local service and is integrated with MedlinePLUS. This allows health consumers to research health topics online and jump directly to related medical services in their geographic area. Illinois will be the most populous state to offer this service with a go-live date of September, 2007.

Through the grant, a small team of librarians was hired to conduct subject analysis on health sites entered in the database. Outreach was conducted to educate other libraries and the public on the availability of this new resource. In a time of six months the project team will have identified, entered, and provided subject analysis for five thousand records.

This poster will concentrate on the importance of integrating librarians and their specialized skill sets with online public resources. Additionally, the project's progress to date will be summarized and some of the difficulties will be highlighted.

10. **Library Research Project on Bioscience leads to Innovative Collaborations**

Louisa Worthington Rogers, Biology, Medicine & Neurosciences
Librarian, M.I.T. Science Library

Research and education in science and engineering increasingly include bioscience as a primary or significant component. The scope of this activity is large and growing. These changes reflect an ongoing transformation in science and engineering research and education. New information resources and tools that intersect with the Libraries' mission and activities are part of this transformation. A team of librarians has studied the growth and change of bioscience and its place at MIT. Our discussions with MIT research scientists, as well as experts from other communities, have generated a variety of collaborative efforts within the libraries, with MIT research centers, and with other libraries such as Harvard Medical Library that offer promising new approaches for supporting interdisciplinary research.

In this paper, we describe the development of collaborative approaches for supporting bioscience research within the MIT Engineering and Science Libraries (ESL).

We demonstrate how a series of interviews with research scientists led to partnerships in sponsoring a bioinformatics instructional program initially taught by scientists, including sessions on gene sequencing and protein analysis.

We are co-sponsoring programs such as NCBI mini-courses and the European Bioinformatics Program for scientists as well as creating educational opportunities at MIT to train librarians in bioinformatics databases.

In order to support the electronic resources needed for the new biology, we have set up a successful collaboration with MIT biology research centers and labs to share the subscription costs of expensive data sets and bioinformatics tools, such as the Biobase databases.

We are developing cooperative efforts between the MIT and Harvard libraries to improve services to jointly-sponsored institutes and programs such as the Broad Institute of Genetics and the MIT-Harvard Health Science and Technology Division.

Conversations with experts at other institutions led to a successful proposal to participate in the NLM fellows program.

Traditionally academic libraries develop and promote their services based on the perceived needs of their users. Our inquiry shows another way of getting new services quickly off the mark: by learning from our users and being flexible to take advantage of opportunities offered by new relationships across the campus and beyond.

11. **Landing on MaRS: An Innovative Approach to Service Delivery**

Helen Kula, MIST, Manager, Market Intelligence Venture Group

This poster will describe an innovative partnership between two organizations to provide information services to a specialized client group.

Located in downtown Toronto, MaRS Discovery District is an independent non-profit organization that works with researchers and entrepreneurs from the university and hospital communities within Ontario and Canada to commercialize their technologies. The University of Toronto (UofT) has been a major stakeholder in MaRS since its inception.

The MaRS Venture Group provides information and advisory services to researchers and entrepreneurs. Venture Group clients require industry, market, company, patent and other information for planning, marketing, and partnering activities.

A partnership between MaRS and the University of Toronto Libraries (UTL) has resulted in the position of Market Information Specialist. The position functions as a cross-appointment between UTL and MaRS – the first ever for UTL. This unique arrangement enables a librarian to reside within MaRS to service it and its Venture Group clients, with access to UTL's resources and a reporting relationship to UTL's Gerstein Science Information Centre.

This cross-appointment has proven to be mutually beneficial for both MaRS and UofT from both cost and service delivery perspectives. UTL has also benefited from this cross-appointment through new linkages and visibility with the technology transfer, research and innovation communities within UofT.