HYPOTHESIS
THE JOURNAL OF THE RESEARCH SECTION OF MLA

Contents

HYPOTHESIS:
The Journal of the Research Section of MLA
VOLUME 18, Number 2
Summer 2004

MLA Papers and Posters Win Research Awards

-- submitted by Carole Gilbert,
Research Section Awards Committee Chair

The Annual Meeting of the Medical Library Association is always a wonderful place to get ideas for projects and research. This year was no different as more than 100 papers and nearly 150 posters were presented by our colleagues.

The Research Section Awards Committee reviewed all abstracts prior to attending MLA and selected those most likely to be research-based for further review. However, all posters were reviewed and as many papers as possible were attended by a group of volunteer reviewers. Judges used a standard evaluation form for scoring the presentations and posters. At least two reviewers scored the papers and posters. After the annual meeting, score sheets were compiled and judges made the final determination of winners by email.

Thanks to all those who helped judge abstracts both at home and at the meeting. This year we had a group of more than 20 volunteers, who made my life much easier by selecting and critiquing.

A prize of $100 was given for each Research Award; Honorable Mention awards received $50. In addition, each of the authors received a certificate commemorating the award.

This year's winners are: Katherine Schilling and Douglas Joubert (papers) and Mary Markland (poster). Honorable mentions go to Nancy Tannery and Pauline Todd (papers) and Terri Wheeler (poster).

AWARD WINNERS – PAPERS

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

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

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HYPOTHESIS. The Journal of the Research Section of MLA
http://gain.mercer.edu/mla/research/hypothesis.html

HYPOTHESIS (ISSN 1093-5665) is the official journal of the Research Section of MLA. It is published three times a year by the Section: Spring (March), Summer (July/August), and Fall (November). It is also available at: http://gain.mercer.edu/mla/research/hypothesis.html

Items to be included should be sent to the Editor by the 15th of the preceding month (i.e., February 15th for Spring, June 15th for Summer, October 15th for Fall). Copy is preferred by e-mail, but will be accepted in other formats. *HYPOTHESIS* is selectively indexed in the *Cumulative Index to Nursing and Allied Health Literature* and the *CINAHL* database.

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Chapter Research Committees Report

— submitted by Priscilla Stephenson

Interim report: A longitudinal study of the impact of librarian-sponsored health information literacy instruction on health consumers' attitudes and behaviors

by Guillaume Van Moorsel and Colleen Kenefick

Low health literacy is projected to cost the US healthcare system between $30 - $73 billion each year,[1] and research supports the need to foster health information literacy through public outreach.[2] Since its inception in 2000, the annual Mini-Medical School (MMS) program at Stony Brook University (SBU) has included a library-sponsored Consumer Health Information (CHI) literacy session providing attendees with practical skills for using Internet-based healthcare information effectively. Outcome measures reveal instruction initially improves attendee skills and self-confidence in locating and evaluating online health information.

SBU health sciences librarians are undertaking a follow-up study of attendees, sponsored in part by a research grant from the New York/New Jersey chapter of the Medical Library Association. Our goal is to gauge attendees' retention of acquired skills and confidence in using online health information, and to assess whether and how their subsequent use of online health information has shaped their healthcare decisions.

The first MMS program was offered in 1990 at the University of Colorado. Today they are a popular way for a medical campus to offer the public a truncated experience of "real" medical school curricula while fostering better health awareness and understanding of the healthcare system. Programs vary in frequency and duration, although most typically feature a format of several weekly lectures provided by medical school faculty members on topics ranging from basic biomedical science and general health issues to specific clinical topics. A unique feature of the MMS program at SBU when it was launched in 2000 was the integration of a session completely dedicated to hands-on CHI instruction administered by faculty librarians.[3]

To help establish cohort groups of similarly skilled learners, MMS attendees were surveyed prior to the CHI session about their skills and confidence in using online health information resources. The survey instrument consisted of a self-assessment tool (or "confidence inventory") that offered a means for gauging the impact of instruction on attendees. Scored responses to statements of confidence (shown below) were arranged along an ordinal scale from 1 (very confident) to 4 (not at all confident). Pre-session self-assessment (pre-SA) results were paired with post-session self-assessment (post-SA) results. Pre-/post-SA results for the intervention group were aggregated over a three-year period (2001-2003). In each year, a control group was comprised of attendees who were scheduled to attend but who did not attend the CHI session. These MMS attendees did not receive CHI instruction, but they had completed both pre- and post-SAs.

Difficulties encountered related primarily to problems pairing the pre- and post-session instruments. In the study's first year, attendees were asked to write their respective names on the pre-SA and post-SA forms, which were paper-based. Observed problems:

- Attendee completed pre- but not post-session instrument (or vice versa);
- Attendee failed to provide her/his name on the instrument, or the response was illegible;
- Attendee failed to provide sufficient distinguishing information to differentiate responses from two or more attendees with the same surname;
- Attendee misinterpreted (reverses) the response scale, ranking their responses from 1 (not at all confident) to 4 (very confident), as opposed to what was intended (see above);
- Attendee provided with both instruments ahead of time used the post-session instrument to provide pre-session responses, and vice versa.

In such instances, results had to be discarded, since accurate pairings were not possible. These problems were largely confined to the 2001 study period.

From 2002-2003, instruments were pre-printed with each attendee's name and individually administered to the correct attendee one week before (pre-SA) and immediately following (post-SA) the CHI session. Results were aggregated and "anonymized" in accordance with requirements of SBU's Internal Review Board, the Committee on Research Involving Human Subjects (CORIHS). Overall results revealed compelling, statistically significant evidence that the instructional intervention had a net positive impact upon attendees' self-assessed skills and confidence using online health information resources according to various parameters, again as shown below. Concern of the current study is to determine the impact of instruction upon attendees' retention over time of acquired skills/confidence, and to determine whether and how this influenced the attendees' subsequent use of information resources to guide health decisions.

In the course of the current study, MMS attendees – including both those who received CHI instruction and

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(Interim Report — Continued from page 3)

those who did not – will be re-surveyed using the same self-assessment instrument. Additionally, they will be asked to indicate whether and how their attendance at the MMS program in general and the CHI session in particular has impacted healthcare decision-making for themselves and their loved ones. More to the point, attendees will be surveyed about how CHI instruction has influenced how they locate health information, and they will be asked to indicate, from their perspective, whether and to what extent they have integrated the instruction received into healthcare decisions they have made. Anticipating reticence of respondents to provide answers via the Internet, the survey will continue to be paper-based. Surveys will be sent via mail to all former MMS attendees from 2001-2003. We also intend to conduct structured interviews by telephone with a random sampling of former attendees, to obtain more detailed responses to questions regarding whether and how MMS and CHI instruction has influenced their health decisions. IRB approval for the study is anticipated but still pending. Results of the study are expected to contribute to a better understanding of the role health sciences librarians can play as CHI educators, as well as the appropriateness of MMS programs as venues for such instruction. We anticipate publishing our findings in an academic LIS, consumer health or public health journal.

Acknowledgement:
This project was partially supported by a chapter research award from the New York/New Jersey Chapter of the Medical Library Association, awarded November, 2003. The full set of findings will be submitted for later publication.

References

1. Sewell J, for The Council of State Governments. Health Literacy Fact Sheet. [Council of State Governments Web Site], 2002. Available at: <http://www.csg.org/CSG/Policy/health/health+literacy/default.htm>. Accessed May 1, 2004.
2. Tolsma DD. Patient education objectives in Healthy People 2000: Policy and research issues. Patient Educ Couns. 1993;22:7-14.
3. Van Moorsel, G. Do you Mini-Med School? Leveraging library resources to improve Internet consumer health information literacy. Med Ref Serv Q. 2001;20(4):27-37.

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Survey questions

Q1: I am confident of my ability to use the Internet/World Wide Web to find general, non-medical information (news, weather, entertainment, etc.)
Q2: I am confident of my ability to use the Internet/World Wide Web to find reliable medical and healthcare information.
Q3: I am confident of my ability to distinguish between reliable, authoritative sources and unreliable, non-authoritative sources of online healthcare information.
Q4: Based upon what I currently know, I am confident of my ability to use online information tools and resources to verify or to supplement medical and healthcare information I encounter in other media (television, newspapers, magazines, etc.)
Q5: Based upon what I currently know, I am confident in my ability to use online information tools and resources to find information I would use (in consultation with my physician or primary healthcare provider) to guide my own healthcare decisions and choices.

IMLS Training Grant Opportunity—$1M

IMLS is currently seeking proposals to develop, pilot, deploy, and evaluate a packaged instructor-mediated online course to train library and museum personnel to plan and evaluate outcomes-based projects. The deadline for proposals is September 15, 2004. The maximum award is $1,000,000 for up to 3 years. The request for proposals is available on the IMLS Website at <http://www.imls.gov/whatsnew/current/outcomescourse.htm>.

For more information, contact Susan Malbin, IMLS program officer, at <mailto:smalbin@imls.gov>.

Medical Library Association
Research Section Business Meeting
May 23, 2003
Washington, DC

1. Welcome

a. Meeting called to order at 0735.
b. 14 members were present. (Quorum is 10 members)
c. Introduction of those present.

2. Benchmarking Brief

a. Michelle Volesko spoke. MLA is asking all libraries, of all types (except those that participate in the AAHSL Annual Statistics survey), to enter data in the database. Deadline is 30 June. [Extended to 11 July.]
To participate in the MLA Benchmarking Network 2004 survey:
1) Go to the printable data worksheet:
< http://www.mlanet.org/members/benchmark/worksheet_2003-04.html >
2) To enter data, you will need your MLA login and password on your MLA Membership Card. If you forgot it, contact: mlams2@mlahq.org. If you have not done so, a good idea is to test your log-in to the survey ASAP and contact MLA if you have difficulty, see #3.
3) If you are unable to access the benchmark database (i.e., after log-in, you are returned to the main benchmarking index page), please contact Kate Corcoran, corcoran@mlahq.org, 312.419.9094 x12. Include your MLA ID# in your email or phone message.
4) Questions? Comments? Don't hesitate to contact your Chapter Benchmarking Chapter Enhancer (BCE) < http://www.mlanet.org/members/benchmark/bce_list.html >; or Michelle Volesko, Chair, MLA BNEB.

3. Announcements

a. Chair: Elizabeth H. Wood
b. Research Section candidate to the MLA Nomination Committee: Cathy Burroughs
c. New Program Chair/Chair Elect: Molly Harris

4. Reports

a. Section Council Representative: Jill Crawley-Low (6/03-5/06)
1) Passed list of potential candidates for the MLA Nominating Committee for recommendations on voting
2) Asked for ideas for the next president's program.
3) Deadlines: 2 AUG for any MLA Board agenda items; 27 SEP to invite a MLA Board member to attend the 2005 business meeting.
4) Reminder members of the Capital Hill visit planned by MLA.
5) Announced a meeting on the post-Brandon-Hill world WED, 26 May, 5PM in Lincoln Room East. All are invited, Alice Hadley will attend.
6) SIGs: Marketing formed, Internet disbanded.
7) AHIP: Renewal has been streamlined. If staying at same level only need to fill out forms. More information on WWWeb < http://www.mlanet.org/academy/ >. Changes have been made to the number of points awarded for various activities. 1155 members.
8) Web hosting.
9) Standards Committee has created a format for creating standards to be used by the sections.
10) Considering making the program chair a two year commitment with overlapping tenure; assistant chair first year, chair the second year; to develop continuity in programs and allow for more time to develop themes/topics.
11) Annual meeting 2005 - May 14-19.
12) Members are going to be asked to give MLA permission to fax them. Permission is a legal requirement.
13) 211.org - 211 is a new telephone number being phased in for health information. 2-1-1 is the national abbreviated dialing code for free access to health and human services information and referral (I&R). 2-1-1 is an easy-to-remember and universally recognizable number that makes a critical connection between individuals and families in need and the appropriate community-based organizations and government agencies. Check your Region for 2-1-1 availability.

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b. Secretary/Treasurer: Elizabeth Connor (6/03-5/05)

May 2003 balance (BankOne)…….	$3595.89
Expenses May 2003 – May 2004	
Research awards……	- 450.00
Program contribution to Public Services Section……	- 300.00
Software for newsletter ……	- 131.70
Breakfast for 2003 Business Meeting……	- 238.40
Newsletter/postage (3 issues)……	-1330.92
Check charges for new account (Harris Bank)....	-51.21
May 5, 2004 balance (Harris Bank)...	1093.66
Deposits May 2004 (section membership dues)..	+1605.71
May 15, 2004 balance (Harris Bank)...	*$2699.37*

c. *Hypothesis* Editor: Andrea Ball

1) Overview: Three issues of *HYPOTHESIS* were published since the last Board meeting on Sunday, May 4, 2003 in San Diego, CA. Each was published in traditional paper copy and electronically on the Section's Web site [http://gain.mercer.edu/mla/research/hypothesis.html] as a PDF document. MLA Headquarters supplied mailing labels and email addresses for all active section members. Copies (24) were sent to Headquarters for distribution to MLA Board Members, and complimentary copies were sent to the Editors of *CINAHL*, *LISA* and *LIBRARY LITERATURE* for indexing. One copy of each issue was sent to the MLA Section Council Chair and to the MLA Section News editor. One copy of each issue was placed into the Section archives, with an additional copy of each issue sent to Jon Eldredge who is holding a second archival set. E-mails announcing the publication of the online issues were sent to the editors of other MLA Section and Chapter newsletters, MEDLIB-L, the Research Section Executive Committee, the *HYPOTHESIS* Editorial Board, MLA News Section Editor and MLA Section Council Chair. The table below gives pertinent information, statistics and expenses for each of this year's issues:

Issue	**Summer 2003**	**Fall 2003**	**Spring 2004**
Vol. & No.	vol. 17, no. 2	vol. 17, no. 3	vol. 18, no. 1
No. of issues printed	250	265	50
No. of issues mailed	214	249	44
Date issues mailed	August	December	April
Pages per issue	12	12	15
Printing	$486.88	$531.99	$143.00
Postage	$164.21	$145.01	$ 24.04
Total cost per issue	$651.09	$677.00	$167.04
Cost per issue mailed	$2.60	$2.55	$3.34

TOTAL COST OF NEWSLETTER FOR YEAR $1,495.13
[2002-2003 Totals: $1,743.21]

2) Distribution: Starting with vol. 18, issue 1, *Hypothesis* was delivered electronically. Section members were emailed the appropriate URL and were able to access the journal at their leisure. Fifty copies were printed and sent to the Section archives, to members who preferred a hard copy or who did not have email access, and to the MLA Board of Directors. The MLA Board has since requested that they receive the journal electronically instead of in print. This will bring the number of printed issues down to less than twenty-five per edition. This change in distribution will greatly decrease the expense of producing and mailing *Hypothesis*, as evidenced in the previous table. After a month or so, the URL became 'live' on the Section's web site so all web users could view the journal.

3) Publication: In addition to the cost savings garnered by publishing *Hypothesis* electronically, the journal is no long bound to conventional publishing practices. There is no limit on the number of pages per issue, and the amount of color used throughout the publication is no longer limited to the cover pages.

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4) Editorial Board: Martha Earl stepped down as the Chapter Research column editor. Heartfelt thanks go to Martha for her many contributions. The Editorial Board welcomed Priscilla Stephenson, UTHSC in Memphis, to take over Martha's work. Welcome, Priscilla! The Editorial Board is thanked for their advice and assistance throughout the year.

5) Indexing: *CINAHL* (*Cumulative Index to Nursing & Allied Health Literature*) continues indexing *HYPOTHESIS*. The review boards for H. W. Wilson's *LIBRARY LITERATURE* and Bowker-Sauer's *LISA* are still considering our requests.

6) Future Plans
Uniform citation format: At the suggestion of Editorial Board member Kris Alpi, the Board will review the need for a uniform citation format for items published in *Hypothesis.*
Peer Review: The Editorial Board will continue to evaluate the need for peer review of material in this publication.
Indexing: We will continue to request that *LISA* and *LIBRARY LITERATURE* consider indexing *HYPOTHESIS*. Note: Ms Claudia Lascar will follow up with Wilson to see if they will index us.

d. Awards Committee: Carole Gilbert
1) People willing to judge papers and posters should contact Ms Gilbert. If you are planning to attend 2005 and interested in judging please contact her before April 2005.

e. Bylaws: Peggy Mullaly-Quijas
1) The changes required by MLA were affirmed

ARTICLE V. ELECTED OFFICERS

Section 2. Duties

F. The duties of the Immediate Past Chair are to ensure continuity in the transfer of responsibilities to the Chair, and to provide counsel to the Chair as needed, ***chair the Nominating Committee and appoint at least two section members to serve on that committee.***

Section 5. Time and Manner of Elections
Election of Section officers and the Candidate for Nominating Committee Membership shall be conducted by secret mail ballot ***and be completed by February 15th of each year.*** Election to office shall be by a majority of eligible votes cast. In the event of ties, the Chair-Elect shall draw lots to determine the result.

ARTICLE VI. COMMITTEES

C. The Nominating Committee is appointed by the ***Immediate Past Chair*** with the advice of the Executive Committee. Members of the Executive Committee are not eligible to serve on the Nominating Committee. The Committee presents a slate by ***December 1*** each year for election prior to the annual meeting. The slate shall include candidates for each office falling vacant on June 30 of the current year.

f. Continuing Education Committee Chair: Kristine Alpi
1) Last year's public health journal club was a success.

2) Planning an Evidence-based Librarianship journal club in summer or early fall of 2004. Watch for announcements on MedLib-L and the RS listserv.

3) If you have suggestions for other journal clubs contact her.

g. Evidence-Based Librarianship Implementation Committee: Jonathan Eldredge
1) Working on updating and refining the question list.

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h. Governmental Relations Liaison: Gary D. Byrd
1) Capitol Hill visits.
2) Need a volunteer for this position.

i. International Research Collaboration Committee: Jonathan Eldredge
1) Reported on Canadian EBL conference, June 2003.
2) Next conference, October 2005, Brisbane, Australia

j. Membership: Elizabeth Connor
1) Membership lists can be gotten from MLA whenever needed. They will start sending them at least twice a year, in spring and fall.
2) Need a volunteer for this position.

k. Nominating Committee Chair: Immediate Past Section Chair (Alice Hadley 2005)
1) Please consider volunteering for a position on the 2005 ballot and let me know by October 15th <ahadley@gam10.med.navy.mil>

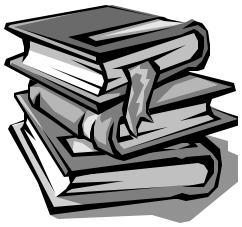
l. Program Committee Chair: Molly Harris
1) Three sessions in 2005.
a) EBL searching strategies
b) Research 101 (focused on hospital librarians)
c) Making EBL a reality.
2) Anne Brice described the movement in Great Britain to help hospital librarians learn to translate research into practice and suggested we consider a similar program here. Members recommended this as an ongoing topic, along with Research 101, and EBL.

m. Research Resources Committee: Leslie Behm
1) Will contact MLA about a MLA hosted listserv for the section.

n. Research Results Dissemination Committee: Liz Bayley
1) Need members
2) Structured abstracts were the focus for 2003/4
3) Future projects are
a) survey of members to determine their involvement in research
b) a database of health library research structured abstracts, which would be Web accessible and search able.

o. Website Editor: Allan R Barclay
1) Would like to know what people would like to see on the site.
2) MLA may make some parts of the site members only accessible (ex.: the list of members) but consensus was to have much of the site publicly accessible, especially the research information (how to do a structured abstract, etc.), the conference awards, and EBL resources.

p. Practice Guidelines Advisory Committee: Molly Harris
1) Will discuss on the new listserv goals of committee, direction and continuation of committee
2) Needs a new chair, and members to volunteer.



Literature Review

—submitted by Ruth Fenske, Ph.D.

Lawrence, Janna C. and Linda S. Levy. Comparing Self-Described Searching Knowledge of First-Year Medical and Dental Students Before and After a MEDLINE Class. Medical Reference Services Quarterly. 23(1):73-81, Spring 2004.

Five hundred seventy-one first-year medical and dental students were given an eighteen-item list of Ovid MEDLINE search skills and concepts and asked to indicate which ones they already know. For each skill or concept, between 53% and 63% of entering students indicated they already knew the skill or concept.

The students were then given a workshop covering the skills and concepts and immediately after were asked to indicate for each of the eighteen skills and concepts if they had learned about it or had learned more about it in the workshop. More than 90% felt they had learned more about eight of the items and more than 80% learned more about fifteen of the items. Only 71% indicated learning more about the difference between OR and AND. This may have been covered and reinforced in their undergraduate studies.

More than 40% of the students thought they already knew fifteen of eighteen of the skills and concepts but also realized after the workshop that they had learned more. When the 200 students who did not claim any prior knowledge are added to those who increased their knowledge, the authors conclude that between 75% and 95% of the first-year students learned something about each of the eighteen skills and concepts.

The authors believe, but do not document, that new students do not distinguish between Internet skills and database searching skills. Some students had even asked to be excused from the workshop. These results show librarians, faculty, and students that just about every student benefited from the MEDLINE workshop.

Just as an aside, the place where these authors could have gone wrong is in using too much librarians' jargon in the list of skills. They included a copy of the checklist in the article; in my judgment, non-librarians should be able to understand all of the items.

Carney, Patricia A., Daniel A. Poor, and Karen E. Schifferdecker, et al. Computer Use Among Community-Based Primary Care Physician Preceptors. Academic Medicine. 79(6):580-590, June 2004.

Westbrook, Johanna I., Sophie Gosling, and Enrico Coiera. Do Clinicians Use Online Evidence to Support Patient Care? A Study of 55,000 Clinicians. Journal of the American Medical Informatics Association. 11(2):113-120, March/April 2004.

Zhang, Dongming, Caroline Zambrowicz, Hong Zhou, et al. User Information Seeking Behavior in a Medical Web Portal Environment: A Preliminary Study. Journal of the American Society for Information Science and Technology. 55(8):670-684, June 2004.

Two recent studies provide data on how clinicians use online information resources. One hundred seventy-eight community-based primary care preceptors received a fifteen-item questionnaire on their use of computer equipment. There was a 73% response rate. Ninety-two percent had a computer available for clinical and educational use and 98% used the Internet as a clinical information resource. Forty-one percent used MEDLINE. Older physicians were significantly more likely to use MEDLINE for patient care decisions than were younger physicians. They were four times more likely than their younger colleagues to use the Internet for student or resident education. It is hard to tell if the older preceptors were interpreting the Internet to include databases coming in over the Internet, or, possibly, they perceived the Internet to be a good source of basic information, similar to a textbook. Preceptors over 60 years of age or older used online resources more frequently than any of the other age groups. The authors provide four possible explanations. They believe it is most likely that older practitioners are cutting back and have more time to use the computer.

Westbrook et al write about the New South Wales (NSW) Clinical Information Access Program (CIAP), a "Website providing point-of-care, 24-hour, online access to a wide range of bibliographic and other resource databases" for 55,000 doctors, nurses, and allied health personnel employed by the state of NSW.

Web log data revealed 48.5 bibliographic sessions per every 100 clinicians and 231.6 hits per every 100 clinicians on "single source databases." Results are based on total number of clinicians, not just those who used the system. Use of the system at each hospital was highly correlated with the number of patient admissions. The relationship held up for each day of the week and for high, medium, and low use individual hospitals. They conclude that use of CIAP was predominately for direct patient care, rather than for research or continuing education.

Sixty-five hospitals representing high, medium, and low use of the system were randomly selected to receive follow-up surveys. Survey coordinators in each hospital were asked to attain a "quota" sample of 25% of the doc-

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tors, 25% of the nurses, and 25% of the allied health personnel in their institutions. It is not clear how the surveys were distributed—were they given to everyone, did the coordinator approach each person individually, did the coordinator distribute them at staff meetings? One hundred eight percent of the quota of doctors, 84% of the quota for nurses, and 84% of the quota for allied health personnel in the selected hospitals responded. The authors do not tell us how the coordinators obtained the "quota." They do call the final group of 5511 responses a "convenience sample."

Although 790 allied health personnel are included in the 5511 responses, they are not mentioned in the results. Seventy-one percent of doctors, 58% of nurses, and 63% overall had heard of CIAP. Forty-seven percent of the 5511 had used CIAP. Eighty-two percent of the doctors who had heard of it, used it and 71% of nurses. Sixty percent of users used the system more than twice a month and 30% used it at least once a week. Seventy-seven percent indicated use to fill a knowledge gap, 57% for personal education, and 46% for research. Nurses were more likely than doctors to use the system for personal education and doctors were more likely than nurses to use it for clinical use. Seventy-five percent of all respondents made use of the system for clinical purposes. Finally, 88% felt CIAP had the potential to improve patient care and 41% had direct evidence of the system's having improved patient care.

Although 29% of respondents had not even heard of CIAP and 53% of respondents had not used it, it was likely that many others who had not even heard of CIAP were non-respondents. Without knowing more about how the survey was distributed by the coordinators, it is hard to evaluate this particular point.

These two studies show that clinicians do use online information resources. The next study analyzes use of the MyWelch web portal at the Johns Hopkins Welch Medical Library. MyWelch has 2500 registered users. There are more than 20 user sessions per day. The authors made a random selection of 100 users who indicated MyWelch as their "exclusive search tool" in a preliminary survey of all registered users. They do not indicate if subjects were asked to consent to have their use of the system analyzed.

MyWelch provides thirteen different customizable services. They are able to track how many times each service is used by a particular user. The My E-Resources area was most frequently used. This is described as being a preferred e-resource set, composed of e-resources most frequently accessed by the user. It is not clear if this includes only items in the Welch "electronic resource collection." The second most frequently used area is My Personal/Research Links. Here again, it is not clear if this could include urls such as Google and AOL Instant Messenger. It is interesting to note that 7.32% of the uses were for the Ask MyLibrarian function.

Based on their study of information seeking models by people such as Kuhlthau, Palmer, and Marchionini, the authors analyzed the relationship between average number of clicks in sessions and average seeking time between clicks and between average number of clicks per session and average seeking time, in minutes, per session. They came up with two graphs, each with three areas. The first area is characterized by many clicks and short browsing; This corresponds to Marchonini and Palmer's directed information seeking. The second area represents a moderate number of clicks and longer browsing times; this is semi-directed information seeking. Undirected information seeking was even fewer clicks and longer browsing times between clicks. The authors perceive this to be a current awareness function. Over fifty-two percent of all sessions were of the latter type. It is not clear to me why a directed session (defined as "focused and systematic browsing on a special object or target") could not also be primarily spent reading a document or two that came up easily, as is true in the undirected information seeking.

Finally they determined "long-term information seeking patterns" by looking at the relationship between seeking time per click and the percent time spent on each of six information modes. They found three patterns they called focused seeking, exploratory seeking, and unsystematic seeking. Again, they fall into the same three areas. They determined that the 33 clinicians in their study did more unsystematic seeking and less exploratory seeking than other types of users.

The authors are reasonably convincing that these users' web information seeking patterns fit the three patterns established for print. However, they are not convincing that this result has anything to do with the users' use of the MyWelch portal.

Winston, Mark and James E. Williams, II. Collaboration Between Practitioners and Teaching Faculty: A Study of Research, Publication, and Citation Patterns. Journal of Education for Library and Information Science. 44(3-4):221-234, Summer/Fall 2003.

Although the title of this article deals with research collaboration between practitioners and teaching faculty, the authors couch their study in terms of leadership competencies. Aside from a possible debate about whether research and statistical skills are a leadership competency or a managerial competency, the constant referral to the idea of leadership is confusing.

Winston and Williams examined all 2000 and 2001 issues of *College & Research Libraries*, *Library Quarterly*,

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(Literature Review — Continued from page 10)

Library Resources and Technical Services, *Library Trends*, and *Library and Information Science Research*. These are the library and information science journals with the highest ISI Journal Citation Reports impact factors. *The Journal of the American Society for Information Science and Technology* was not included, because the authors consider it to be more focused on information science than library and information science.

One hundred nineteen of 236 articles were considered to be original research. First authors were predominately academic librarians working below the level of department head and library and information science faculty. Academic library administrators also were first authors. Half the articles had co-authors. Here again academic librarians working below the level of department head with lesser numbers of academic library administrators and library and information science faculty were second authors. Authors tended to collaborate with others working in similar positions. Only three articles represent collaboration between teaching faculty and academic librarians.

Although much has been done to promote collaboration between practitioners and faculty, it is not happening in the articles published in high impact factor journals in library and information science. *JMLA* does publish some articles co-authored by faculty and practitioners. However, the proportion is probably not any higher than in the journals in this study.

(Award Winners — Continued from page 1)

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

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

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

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

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

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

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

Methods: Random-effects and regression analysis: Thirty-five AAHSL libraries that participated in the 2002 LibQUAL+ survey define the current research group. Nested-effect analysis of variance was analyzed using a linear mixed model (LMM). Measures of association were evaluated using Pearson correlation coefficient, and a linear regression model was used to develop the predic-

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tion equation. Using these statistical tests, the primary researcher was able to answer questions about the effect of user demographics on perceived levels of satisfaction with library services. Specifically, the researcher investigated three hypotheses of interest: (1) that the size of library staff affects measures of overall satisfaction, (2) that the number of constituents influences measures of overall satisfaction, and (3) that the ratio of staff to constituents affects measures of overall satisfaction.

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

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

AWARD WINNER – POSTER

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

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

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

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

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

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

HONORABLE MENTION – PAPERS

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

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

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

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Methods: This investigation focused on five infectious diseases (anthrax, botulism, plague, smallpox, tularemia) listed as category A by the Centers for Disease Control and Prevention. They are caused by high-priority agents with the potential for possible future major impact on public health. Using evidence identified by extensive exploration of electronic and print resources, a team of experienced librarians with clinician oversight compiled a comprehensive description of each disease. Each disease description incorporates history, signs, symptoms, and laboratory findings. The team carefully analyzed the original sources of data supporting each disease finding, and particular attention was given to their specificity and sensitivity, as this information will be essential in equipping library staff with the necessary knowledge of where key studies on those conditions chronologically reside.

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

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

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

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

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

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

Results: In 2002, self-reflective surveys were sent to the hospital's 864 clinical staff during the initiation of online resources. The response rate was 47% (n = 407). One year later, a follow-up survey was sent to those who had returned the first survey. The return rate for the second survey was 58% (n = 236). A comparison of the results indicated that 25% of the clinical staff had begun to use the library's online resources on a weekly or monthly basis. The majority of them used the resources to read an article, locate drug information, or find information for a patient. The results also indicated that 25% of these users had canceled personal journal subscriptions and 50% consulted the medical literature more often. Clinical staff not accessing online resources, used colleagues, print textbooks, and journals to satisfy their information needs. A comparison of the clinical staff regularly accessing online resources with those that were not showed that those using the online resources also used colleagues, print textbooks, and journals to satisfy their information needs and used them more often than the clinical staff who did not use the online resources.

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

HONORABLE MENTION – POSTER

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

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

Objective: To identify an electronic resource that would synthesize the most current evidence-based medical practices available and is designed so the busy clinician could

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(Award Winners — Continued from page 13)

intuitively locate specific answers to queries in a few clicks while seeing patients. Studies show that clinical questions arise for clinicians while actively seeing patients, yet nearly all go unanswered because of time and resource limits.

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

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

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

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

Don't Forget to Vote - MLA Proposed Bylaws Amendments

Ballots for proposed bylaws amendments along with a cover letter and summary of the discussion at the annual meeting were mailed to voting members in early August. For the amendments to be implemented, 25% of the mailed ballots must be returned, so you are urged to complete and return your ballot by the September 13, 2004, postmark deadline. If you need another ballot, please contact Mary Langman, 312.419.9094 x27 or at <mailto:mlaedo2@mlahq.org>.

The Donald A. B. Lindberg Research Fellowship

MLA is now accepting applications for The Donald A. B. Lindberg Research Fellowship established by MLA to fund research aimed at expanding the research knowledgebase that links the information services provided by librarians to improved health care and advances in biomedical research. The endowment will provide a $25,000 grant, awarded annually by MLA through a competitive grant process, to a qualified health professional, researcher, educator, administrator, or librarian.

An application and more information about the fellowship can be accessed at <http://www.mlanet.org/awards/grants/> or by contacting Lisa C. Fried, MLA's Credentialing, Professional Recognition and Career Coordinator at <mailto:mlapd2@mlahq.org> mlapd2@mlahq.org.

Nominations now being accepted
2006 Janet Doe Lecturer

Application Deadline: November 1, 2004

The Janet Doe Lecturer is an individual chosen annually by MLA for his/her unique perspective on the history or philosophy of medical librarianship.

The person selected this year will speak at the Association's 2006 Annual Meeting, which will be held in Phoenix, Arizona. The lecture is subsequently published in *JMLA*.

The Lecturer receives a $250 honorarium, travel expenses to the site of the Annual Meeting, hotel expenses for 1 night, per diem for 1 day and a certificate. A nomination form and further information is available at: http://www.mlanet.org/awards.

Please send nominations to Lisa Fried, MLA, Professional Development Department, 65 East Wacker Place Suite 1900 Chicago IL 60601-7298 to arrive by November 1, 2004

Nominations now being accepted

2005 Louise Darling Medal for Distinguished Achievement in Collection Development in the Health Science

Application Deadline: November 1, 2004

The Louise Darling Medal is presented annually to recognize distinguished achievement in collection development in the health sciences. The award was established in 1987 and first awarded in 1988, with a contribution by Ballen Booksellers International, Inc. It continues to be supported in part by Blackwell North America, Inc. The medal honors Louise Darling's significant accomplishment in this professional specialty. Nominees may be individuals, institutions or groups of individuals; it is preferred that they be members of MLA.

A nomination form http://www.mlanet.org/pdf/awards/dar_nom_20030730.pdf and further information is available at: http://www.mlanet.org/awards

Please send nominations to Lisa Fried, MLA, Professional Development Department, 65 East Wacker Place Suite 1900 Chicago IL 60601-7298 to arrive by November 1, 2004

Interested in an Evidence-Based Librarianship Electronic Journal Club?

-submitted by Kristine Alpi, Continuing Education Chair

The Research Section is sponsoring an electronic journal club on the topic of Evidence-Based Librarianship. Participants who complete the club will earn 7.5 AHIP points by reading and discussing 6-12 articles. Recommendations for articles to be read are appreciated, even if you cannot participate in the club. The club will begin in October 2004.

Interested? Contact Kristine Alpi at kalpi@att.net by Sept.15, 2004.

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