



WISCONSIN HEALTH SCIENCE LIBRARY ASSOCIATION NEWSLETTER

SEPTEMBER 1986

NO. 186

COMING EVENTS

- September 17-20 BIOSIS Training. Medical College of Wisconsin. Milwaukee.
- October 10 NLM Online Update. 9:30 coffee. 10:00 Session. Madison General Hospital. Helen Ann Brown, Instructor.
- October 22-25 MC/MLA. Bismarck Hotel. Chicago.
- November 2-7 ONLINE '86. Chicago. Contact Elzada Primus, GHRMLN Office 312-996-2464. September 30 deadline.
- November 5 Seminars for Health Sciences Librarians. "The One-person Library", Carolyn Barloga, Presenter.
- November 7 MLA Certification Exam.
- April 30- May 1, 1986 WHSLA Annual Meeting. Marc Plaza Hotel. Milwaukee.

FROM WHSLA PRESIDENT

The WHSLA bylaws revisions were passed by the membership in this summer's mail ballot.

Fall WHSLA Executive Board meeting has been scheduled for October 3 at St. Vincent's Hospital in Green Bay. Please submit to me by September 19 any items that you would like to have placed on the agenda. Any WHSLA member is welcome to attend--please let me know if you are interested in attending and need directions to the hospital.

COLAND's committee on library automation has asked WHSLA for input on automation plans. I have copies of the following COLAND position papers, and will send them to anybody interested.

- ISSUE 1: Purpose of statewide database
ISSUE 2: Development & maintenance of statewide database.
ISSUE 3: Quality of data in statewide database.
ISSUE 4: Physical Format of WISCAT.
ISSUE 5: Format of WISCAT data for local automated systems.
ISSUE 6: Funding of statewide database.
ISSUE 7: Interlibrary loan telecommunications.
ISSUE 8: Automating small libraries & IMC's.
ISSUE 9: Access to online databases.
ISSUE 10: Role of public library systems.
ISSUE 11: Remote access to automated library systems.
ISSUE 12: Intersystem communication.
ISSUE 13: Role of academic & special libraries.

Please notify me if you want copies of any or all of these position papers.

-Linda Oddan
WHSLA President

WHSLA BYLAWS AND GUIDELINES COMMITTEE REPORT

The WHSLA Bylaws changes are now official. As of the deadline, 56 ballots were returned, with 54 in favor of the changes and 2 against. All WHSLA members will be receiving a printed copy of the revised bylaws later this fall; in the meantime, refer to your edited copy that was sent with the ballot.

Thanks to all for your participation in this process. We are looking for the same level of cooperation in the Guidelines revision - please respond promptly to requests for assistance. We hope that the Guidelines will spell out some of the detail not needed in the Bylaws. It is interesting to note that we are already revising our Guidelines when other groups such as the

Hospital Library Section of MLA are just beginning theirs. The Guidelines are very helpful to officers, representatives, and committees, assisting all of us to meet WHSLA needs by building on previous experience without reinventing the wheel.

-Your Committee
Peg Allen
Jackie Pratt
Al Zimmerman

CONTINUING EDUCATION FOLLOW-UP

A reminder that the August issue of the Newsletter contained the registration forms for the major continuing education courses, particularly in the field of health sciences librarianship. They range from the NLM Online Update, coordinated this year by the Regional Online Training Center, to conferences in the midwest area. Early registration fee deadlines for the conferences are fast approaching, so make your plans early for the programs which are important to your professional growth.

MC/MLA OCTOBER 22-25

The 1986 MC/MLA Meeting in Chicago, October 22-25, offers a wide range of activities for four full days. The theme "Directing Change...Fostering Excellence" focuses on the roles librarians play. Complex and well-organized resources contribute meaningfully to patient care, education, and research. The topics, therefore, emphasize those challenges which librarians are facing: automated technology, administration and management, and evolving services. In order to enhance skills and further state-of-the-art exposure, a variety of sessions and formats are part of the Meeting. Early registration fee ends September 15. Contact Barbara Schmiechen if you need registration information.

CURRENT CONTENTS ARTICLE

Several people, including Linda Oddan, WHSLA President, and Al Zimmerman, wanted people who do not subscribe to Current Contents to have access to the articles by Eugene Garfield for use in strengthening the case for libraries within hospitals. Al wrote for permission to reprint the articles. They are reproduced in this Newsletter with permission from Current Contents. Copyright 1986 by the Institute for Scientific Information®, Philadelphia, PA 19104 USA.

PEOPLE

A number of women who have been instrumental in the strengthening of health science libraries and the founding of health sciences library state organizations have made decisions to retire during the past couple of years. Another person to add to the list is JOAN ZWEIFEL, Director of Library Services at St. Marys Hospital, Madison. Joan has been at St. Marys for eighteen years. She has been very active in all facets of health sciences librarianship both in Wisconsin and the region. She has been South Central Health Sciences Library Cooperative's Coordinator since its inception, co-chaired the 1978 MC/MLA meeting in Madison, and has been serving as the State Council Treasurer. We wish her well in her retirement. Joan has indicated an interest in consulting and teaching among things she wants to continue in the next few years.

LINDA MILLER has resigned her position at Beloit Memorial, Beloit to become a staff member of Arrowhead Library System, continuing her interest in multi-type

work. Beloit Memorial is currently hiring their new librarian.

B. KEPPEL is the new librarian at Community Memorial Hospital in Menominee Falls. B. recently moved to Milwaukee and was formerly a Reference and Serials Librarian at the Oregon Health Sciences Library. Welcome B.

HCFA REGULATIONS

On May 27, 1986 Dr. Otis Bowen, Secretary of the Department of Health and Human Services, signed the regulations which were proposed in 1981 on conditions of participation for hospitals in Medicare/Medicaid reimbursement. MLA had continued to oppose those regulations which did not include provisions for libraries. This would adversely affect those 1500 small community and rural hospitals not covered by JCAH standards. As late as March 25, 1986 the MLA Executive Director had written Dr. Bowen indicating MLA's opposition to the proposed conditions. They were published in the Federal Register of 3 June 1986, and generally have a 1 October 1986 effective date. -MLA NEWS No. 187
No. 187/August 1986

1986 MLA SALARY SURVEY

The results of the 1986 MLA salary survey are now available. The last survey was conducted in 1983. The 1986 publication continues the 1983 information about the respondents' personal backgrounds and their parent institutions or employers salary data, and adds the linkages to the primary area and level of responsibility. The publication "MLA 1986 Salary Survey" is available for \$19.00 for MLA Members, \$27.00 for non-MLA members from Medical Library Association, 919 N. Michigan Ave, Suite 3208, Chicago, IL 60611.

EDITORS NOTES

1) Because of the reduction in staff at Middleton's Office, several people besides myself are now involved with the Newsletter production. Steve Berg in the copy center is doing paste-up; Pam Smith, the Administrative Assistant in the main library office, proofs and runs the computer copy and oversees the project; Theresa Peterson, part-time Program Assistant in the main library office, puts together the final version and has copies run; and Bill Carter, the shipping and mailing clerk, attaches the labels and prepares the Newsletter for mailing.

2) I have shifted the deadlines for both October and November Newsletters because of the impending combined November-December issue that will be published. Please post these for your information.

COPY DUE - OCTOBER 8
NOVEMBER 12
JANUARY 7

-Barbara Schmiechen
Editor

This Newsletter is published for the health sciences libraries of Wisconsin at Middleton Health Sciences Library, UW-Madison, 1305 Linden Dr., Madison, WI 53706. It is supported in part by the Wisconsin Health Sciences Library Association.

While these new informatics technologies are cost-effective in providing a balanced perspective on medical issues, they are by no means designed exclusively for physicians and medical students. All health professionals can benefit from learning information-retrieval techniques. Indeed, one sign of a professional is the recognition that the literature is important. For instance, the nursing profession constitutes the largest single group of health-care workers in the world.³ To meet the needs of this profession, the *American Journal of Nursing's (AJN) International Nursing Index* is now sold together with ISI's *Nursing Citation Index*⁴ to enable nursing educators, students, and practitioners to keep up with the expanding nursing literature. When looking up a paper or author in

the *Nursing Citation Index*, users will be directed to newer, related articles covered in *AJN's International Nursing Index*. Health service administrators will also benefit from our upcoming edition of *CC/Health Services Administration* covering the multidisciplinary literature ranging from clinical science to strategic management.

Despite the new hospital library programs and the many arguments outlined in the following reprint, the HCFA proposed regulations will most likely become law this summer. I can only hope that medical school and hospital administrators will recognize that the role medical libraries play in providing quality health care supersedes shortsighted government regulations.

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3. Journal citation studies. 44. Citation patterns in nursing journals, and their most-cited articles. *Essays of an information scientist: The awards of science and other essays*. Philadelphia: ISI Press, 1985. Vol. 7, p. 336-45.

The Impact of Health Information Delivery on the Quality of Patient Care: Whither Medical Information Science?*

by Eugene Garfield, Institute for Scientific Information®, Philadelphia, PA

*Paper given at the Medical, Health and Welfare Libraries Group Conference, UK, 5 July 1985.

In 1983 the Health Care Financing Administration (HCFA) of the US Department of Health and Human Services proposed new regulations that would eliminate the need for a hospital to maintain a medical library in order to qualify for participation in Medicare and Medicaid. US government-sponsored health insurance programs for the elderly and medically indigent. Just two and a half years ago in *Current Contents*® (CC®), I speculated on the impact this kind of change might have on the quality and cost of health care.¹

Hospital libraries are of crucial importance, and I believe that a lack of support for them will have far-reaching consequences. Reduction in library support will hurt not only physicians but also patients and their families. In short, medical information is a requirement for cost-effective delivery of health care.

Health-care professionals need to keep up with current medical trends in order to make informed research, teaching, and clinical decisions. The key question is whether hospital libraries are necessary for this purpose. There are hundreds of physicians and researchers in the Third World who rely mainly on personal contacts, CC, a few subscriptions to medical journals, and reprint exchanges for keeping up-to-date.

However, to think of medical libraries simply as depositories to facilitate keeping up-to-date is to make a mockery of libraries as the collective memory of organizations and societies. Indeed, if enacted as proposed, the short-sighted regulations considered by administrators in Washington would reduce many local US hospitals and physicians to the status of the underdeveloped in a developed society. Knowing the aspirations of Western-trained

physicians in the Third World, I am sure they would be perplexed to learn we are entertaining such notions. But poverty in the midst of plenty is not a new phenomenon in the US—or in the UK.

It is a hallmark of advanced societies and medicine that we value and have developed great national libraries and thousands of local libraries. The existence of the library is a symbol of respect for past and present knowledge. It is an implicit statement that we cannot carry in our heads all that is needed to practice modern medicine. If we wanted to rely on folk medicine, we could pass on knowledge by word of mouth from generation to generation. However, even the ancient Egyptians created medical papyri to jog the limited human memory.

We are all aware of how much the scientific literature is growing. Even with books and journals, professionals have a hard time keeping up with the growth and changes in medicine on their own. But the mere exponential growth of science and technology and the amount of research written, published, distributed, indexed, and abstracted do not by themselves justify the need for hospital libraries. The knowledge base on which biomedical advances have been built is accessible in many ways. The hospital library is not needed simply to increase the physician's exposure to more information in the decision-making process but to direct him or her to more specific information. It is precisely the need for more specific information that makes libraries, indexes, and especially librarians more relevant.

Clearly there is more to the modern medical library than a room with dusty books on a shelf. Today's library has not only widely expanded its services to include computer-based systems but has also added a variety of programs to make current, relevant information quickly available. Part of the problem health professionals and information specialists face is our unwillingness to deal with the semantic problem of calling an information-switching center a library.

In a study of the role of the health sciences library in information management, Nina W. Matheson, director, Johns Hopkins Welch Medical Library, and John A.D. Cooper, president, Association of American Medical Colleges, advise that computer-based systems are necessary to develop information management networks to protect state-of-the-art health care. They state, "As more fac-

ulty members concentrate more time and effort on the provision of health care, and less energy is devoted to expanding the knowledge base of medicine, the importance of a reliable and dependable flow of information from the research front to the health practitioner becomes greater."²

Matheson and Cooper make recommendations for hospital libraries that would help establish this information flow to enhance research, patient care, and education. These recommendations include establishing a computerized network between different kinds of libraries to facilitate the flow of data between various hospitals. A database management system should be developed so as to organize, package, and deliver information to augment clinical decision-making and learning. An individual should be designated to coordinate and implement institutional information programs. In addition, they recommend a program to teach medical practitioners, staff, and students computational skills and information management techniques.² This latter point concerning the inclusion of information skills in medical education is recommended by the Association of American Medical Colleges in the recently released General Professional Education of the Physician (GPEP) report.³

Computer-based systems require an initial outlay of money that, at first glance, might seem an unjustified expense to hospital budget committees, since they do not increase income. However, Ellen W. Green, director of libraries, Cedars-Sinai Medical Center, Los Angeles, California, in an article describing her experiences automating both managerial and operational functions within the Health Sciences Information Center, warned that the lack of computer technologies in the library is potentially dangerous—it may block qualified decision-making in the clinic and research areas.⁴

Cost is obviously a primary factor in operating a successful hospital library. Barbara Halbrook, Medical Library, Washington University, St. Louis, Missouri, has observed that "reports of discontinued programs indicate [that] lack of... budgetary support for the clinical librarian is the major reason for a program's demise."⁵ But others find that hospital libraries are quite successful and worth the cost. New and innovative ways to fund these programs have been initiated.

The expense may not be as high as many budget administrators might believe. In a

1981 study comparing the cost of clinical laboratory services with traditional lab tests—such as blood tests and X rays—Georgia Scura, Medical Library, and Frank Davidoff, Department of Medicine, University of Connecticut School of Medicine, Farmington, found that library reference services cost between \$20.00 and \$32.00. This included \$8.00 to \$20.00 for a MEDLINE search, \$10.00 for one hour of the librarian's time, and \$2.00 for photocopying. This total was found to be less than the cost for a single chest X ray or one set of electrolyte studies.⁶

They also observe that a review of the literature, like a lab test, rarely leads to new diagnostic ideas. Both, however, may serve as a "stop-function."⁶ A stop-function may show that certain tests are not necessary, consequently lowering patient risk, discomfort, and overall medical costs.

In a 1983 article in the news magazine *US News & World Report* by Abigail Trafford and Clemens P. Work, William Guy, former director of California's Medi-Cal program (a health insurance program for the elderly in California), was quoted on the importance of this stop-function. "Today," Guy said, "a physician who walks in and orders every test known to man tends to be the hero of the hospital. Tomorrow he's going to be the bum."⁷ I think that this development has already occurred in the US.

The point is that any time an unnecessary test is avoided—or a more relevant one is applied—the patient, the hospital, the physician, and even the insurance companies benefit from lower costs. Considering all the risks in practicing medicine today, the hospital librarian can play an even greater role in selecting the best course of treatment.

Helpful for Second Opinions

Second opinions are applied less frequently than they ought to be, especially when a doctor is in a remote location. Current literature provides the physician with a variety of expert opinions. This is particularly crucial for rural hospitals with a small staff. Presumably, in larger city hospitals, one can talk to the doctor down the hall to obtain a second opinion. But this is done less frequently than you might believe.

Every physician maintains a personal file containing reprints, case notes, and other information, not the least of which is names and addresses of experts encountered in the past.

This auxiliary memory can lead to useful treatment ideas. Using this source for a second opinion is probably as important as accessing the current literature, browsing, or using literature searches.

In order to improve access to these second opinions, the Institute for Scientific Information (ISI[®]) has developed *Sci-Mate*[®], a microcomputer software package. While there are many other bibliographically oriented software products, we believe *Sci-Mate* is the only one that integrates the searching, filing, and publishing needs of the physician or scientist.

Microcomputer systems like *Sci-Mate* make it much easier for the clinician or clinical librarian to obtain second opinions by searching personal or local files consisting of any textual material, such as case summaries, abstracts, or titles. *Sci-Mate* also facilitates searching database bibliographic files like *SciSearch*[®] or MEDLINE.^{8,9}

Modern database management systems, designed to accommodate textual materials, allow users to keep tabs on reprints, correspondences, notes, or patient records, and employ menus for the occasional user who is not trained in command languages.^{8,9} There is also a native-language mode, should the system be shared by the physician and the medical librarian. In the future, it is likely that such shared systems will be commonplace. The physician will be at one terminal and the trained clinical librarian at another, so they can proceed as rapidly as possible, with the doctor providing feedback on which way to go.

With the increasing affordability of microcomputers, the development of new software programs for medical searching, and the availability of microcomputers in libraries, the majority of US physicians and researchers have access to microcomputer technology. Although I imagine that this situation will exist in Europe before long, we can expect only slowly increasing use of *Sci-Mate*-like systems, and it is unrealistic to think they will be adopted overnight. It may be easy to play computer games, but organizing information files is another matter. Medical librarians can make this transition to information management easier for the busy doctor. This accounts, in part, for new microcomputer centers at medical libraries, such as at the University of Pennsylvania and elsewhere.

Once that initial flush of excitement with a microcomputer is over, the physician then

has to face his usual routine. While the literature keeps getting published, not everyone enjoys sitting at a terminal. Library services have long included a selective dissemination of information (SDI) service to keep patrons current with the literature. This can be done through the MEDLINE SDI mode or through services like *Automatic Subject Citation Alert* (ASCA[®]) and *ASCATOPICS*[®]. These weekly or monthly services are delivered in the form of computer printouts. Another variant on this is the BITS service of BIOSIS, which is delivered on a microcomputer diskette and is compatible with *Sci-Mate*. Recently we remodeled the ASCA printout to take advantage of laser printers.¹⁰ An extension of the personalized SDI service is the more generic *ASCATOPICS*.¹¹ These selective reports are useful for a group that might be called an invisible college or a specialist group.

Consensus Conferences

A weekly *ASCATOPICS* report would be especially relevant prior to the organization of medical consensus conferences or journal clubs. These are common in the US but curiously lacking in the UK. SDI reports could help make participants aware of state-of-the-art treatments. When participants get together

er, the medical library staff could be sure to put the most current literature at their fingertips. In the future, consensus conferences will also be aided by access to systems such as *ISI/BIO MED*[®], accessible via DIMDI in Europe.

We have also developed a versatile system of mapping the quantitative and taxonomic relationships between scientific fields. By using multidimensional scaling, we are able to portray the world of science and medicine in terms of quantitative citations or connections.¹² These methods will not only help physicians find literature, but they will also become expert systems that will show physicians the world of medicine as it really exists at any moment in time.

Another way many physicians try to cope with the ever-increasing bank of medical information is by participating in continuing medical education courses. The cost of these courses includes not only the course fees and travel costs but also, for private practitioners, the income lost while attending. The cost of continuing education is included in overhead but eventually is a cost factor in medicine. Yet, according to David C. Evered and Hillary D. Williams, Ciba Foundation, London, continuing medical education has rarely been objectively evaluated to show that it meets medical graduate needs.¹³

(To be continued in Part 2)

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The Impact of Health Information Delivery on the Quality of Patient Care: Whither Medical Information Science?*

by Eugene Garfield, Institute for Scientific Information[®], Philadelphia, PA
*Paper given at the Medical, Health and Welfare Libraries Group Conference, UK, 5 July 1985.

(Continued from last week)

Edward J. Huth, editor, *Annals of Internal Medicine*, proposes that pressures for keeping updated can be offset by getting information for the immediate problem at hand. He suggests that much of the investment in post-graduate courses might be more effectively spent in providing better hospital libraries.¹⁴ Howard S. Barrows, Southern Illinois University School of Medicine, Springfield, worries that medical schools make students memorize but do not emphasize problem-solving skills. He encourages a "problem-based, self-directed learning"¹⁵ that will provide medical graduates with a way to keep up with continuing education through self-directed, information-seeking skills.

The GPEP report, mentioned earlier, agrees with the need to shift educational emphasis: "Medical faculties have thought it imperative that medical education keep pace with biomedical science and have expanded the base of factual knowledge that students must commit to memory. By this concentration on the transmittal of factual information, faculties have neglected to help them acquire the skills, values, and attitudes that are the foundation of a helping profession."³

Hospital Library Resources

A variety of learning resources that can help develop these information-seeking skills can be provided by the hospital library. So, in addition to being invaluable for current information needs and cost-effective diagnostic decisions, as well as second opinions, the hospital library can also provide alternatives to formal continuing medical education courses.

The modern hospital library can offer a variety of resources and programs to enhance its services. For instance, PaperChase, developed by Gary L. Horowitz and Howard L. Bleich, Beth Israel Hospital, Boston, is a

computer-based bibliographic information-retrieval system designed to permit computer-ignorant users to search for medical literature. The original PaperChase system has a database of 400,000 references found in the hospital library. Terminals are located throughout the hospital for use any time, day or night.¹⁶ These same terminals are used to obtain other medical and patient information. This is part of a much larger program of computerization. The library service is piggy-backed onto a major program of medical informatics.¹⁷

This system has been very popular and is being adopted in other hospitals. It has proved simple to use, and the average search takes about 11 minutes. A more recent version of PaperChase expands its coverage to the complete MEDLINE file. PaperChase is not unlike a system developed at Washington University, St. Louis, Missouri, where they have recently put CC online. This is the first US test site at a medical school. However, a comparable system has been available at the Imperial Cancer Research Foundation in London for several years.

Clinical Medical Librarians

PaperChase is only one of the available library options to improve information exchange between the doctor and the library. The first clinical medical librarian (CML) program was developed by Gertrude Lamb, then of the University of Missouri (Kansas City) Medical Library. A CML attends medical rounds as part of a health-care team to learn about case problems. As a result of direct or perceived requests by physicians, the CML does an information search and gets the information to the doctor immediately so that it can be used on a particular case.¹⁸ This program has been so successful that it has sparked many other programs across the US, in Canada, and here in the UK.

Agnes A. Roach, Health and Hospitals Governing Commission of Cook County, Illinois, and Whitney W. Addington, Division of Pulmonary Medicine, Cook County Hospital, found that the services of a clinical librarian improved both patient care and education by making current information accessible to the health-care team. Furthermore, the health-care team learned how to use the library while becoming aware of its potential in the health-care setting.²⁰

In addition to increasing awareness, Scura and Davidoff found that as a result of information provided by a CML program at the University of Connecticut Health Center, the course of patient management was affected in 20 percent of the cases.⁶ This compares favorably with the results of diagnostic tests. Richard H. Dixon and John Laszlo, Duke University Medical Center, Durham, North Carolina, found that only 5 percent of the routine laboratory testing, such as blood tests and X rays, actually affects the course of treatment.²¹

A CML program at McMaster University, Ontario, Canada, uses a half-time librarian to rotate through different health departments for a short time. The emphasis is to teach health professionals information skills for future use. Studying the effectiveness of this program, Joanne G. Marshall, health sciences librarian, and Victor R. Neufeld, Department of Medicine, McMaster University, found that health professionals changed their perceived value of the literature search in patient care. Even after the CML left, health professionals continued to request MEDLARS searches and to use the research librarian more often than before the CML program.²²

This last point is one I have stressed quite often when discussing librarian fears of automation. Far from displacing information professionals, microcomputers have increased the value of, and demand for, librarians. Once a physician has learned how to do his or her own unified searching, he or she is in a much better position to ask the help of a respected library colleague to execute a search and possibilities of the system makes the physician a better client.

In addition to meeting the information needs of health professionals, the CML program at McMaster University is slightly different in that it extends library services to

patients and their families. This reflects recognition by the medical community of the consumer's growing participation in health care and the individual's right to make informed decisions about care and treatment. In an interview with Carol Fenichel, Seymour I. Taine, former editor of *Index Medicus*, forecast that this was an inevitable consequence of an information-conscious, information-literate society.²³

Patients and families accounted for 24 percent of the requests from the McMaster library. These requests for information were used to develop 10 information packets carefully checked by health professionals for accuracy. Patient response to these packets was enthusiastic—more than half of the questionnaire respondents noted that the information supplied was new and informative.²² Another option is the kind of consumer health information programs that involve interlibrary cooperation between public libraries and medical libraries as described by both Ellen Gartenfeld, Mount Auburn Hospital Community Health Information Network, Cambridge, Massachusetts,²⁴ and Eleanor Y. Goodchild, then at Los Angeles County Harbor General Hospital, Torrance, California, and colleagues.²⁵

I also believe that providing information services to patients will make it possible for doctors to share these costs. As a consequence, doctors will also have to be more open in discussing the possible treatment choices. This will happen more slowly in Europe, where the patient-doctor relationship is still more traditional.

Seven years ago, Bette Greenberg and colleagues, Yale University, evaluated the Yale Medical Library CML program to learn if its objectives had been met. Using a scale of one to four—with four being best—an average score of 3.45 was obtained from clinicians favoring the relevancy of information provided by the CML. In addition, the overall mean response for the time-saving ability of the CML program was an overwhelming 3.88. This evaluation showed that the CML program is time-saving, cost-effective, and has multidimensional benefits in a patient-care setting.²⁶

A CML program patterned after the one developed at the University of Missouri (Kansas City) Medical School was initiated at the Department of Surgery, Guy's Hospital, London. Like the programs in the US, this pro-

gram received a favorable response from most participants and improved the use of literature-search facilities. However, differences between health-care practice in the US and UK made the London program not quite as successful as its US counterpart.

Anne Wilkin, librarian, and Ian McColl, professor of surgery, Guy's Hospital, believe that American surgeons are more conscious of the literature than their British counterparts. Moreover, because there is only one surgeon for every 59,000 people in the UK—compared with one surgeon for every 5,900 people in the US—on average, American surgeons perform fewer operations than British surgeons and thus tend to have less practical experience.²⁷ I might add, however, that many European scientists believe that Americans know only the English-language literature, while anything in French or German, for example, is shunned. However, this has not been documented, and it is worth noting that a remarkable number of American and Canadian physicians are foreign-born.

Since the pattern of information demand by UK practitioners differs somewhat from that in the US, in order for a clinical librarian program to be more successful in the UK, it will have to diverge from the US prototype to more closely match the UK's own special needs.

The LATCH Program

Another option provided by the hospital library is a program called Literature Attached to Charts (LATCH). Created at the Washington Hospital Center, Washington, DC, in 1967, this program provides a package of information tailored to a patient's case, attached directly to the patient's chart.²⁸

LATCH's development was based on two assumptions. First, that improved medical care will occur if the attending health professionals are aware of the recent, case-specific literature. Second, the library can help hospital staff to become more familiar with medical literature by placing it near the patient to whom it relates.²⁸

The LATCH process is actually very simple. After a physician requests information on the patient's chart, the unit clerk relays the request to the library. A case-specific information package is prepared and attached to the patient's chart. After the patient is dis-

missed, the LATCH is cataloged in the library for future reference.

At the Washington Hospital Center Medical Library, the LATCH experience was studied between the years 1968 and 1975. It was found that LATCH was often used to educate new physicians. Attending physicians and staff nurses accounted for only 20.1 percent of requests, while interns and first-year residents accounted for 68.5 percent of requests.²⁸ Results also showed that the LATCH program was very popular—71.8 percent of its users termed LATCH "very useful," 25.2 percent found it "moderately useful," and only 3.0 percent termed LATCH "not useful."²⁸

Both a CML program and LATCH are used at Framingham Union Hospital, Massachusetts. Sandra R. Clevesy, director of Library Services, attends morning rounds to review cases of newly admitted patients.²⁹ At this time, the information needs of the health team are discussed. More than half of the patient-related inquiries made at the morning report are answered by the LATCH service the same day, since they pertain directly to a case.

For more general, less urgent questions, the CML researches the topic and presents it at the next morning's rounds. Clevesy found that this combined service was useful not only to attending physicians but also to therapists, social workers, and family members, confirming that clinical library programs can provide hospital-wide service.²⁹

Circuit-Rider Librarians

As it stands, the HCFA proposed regulations are still pending. If they are passed, and the requirement to maintain a hospital library is removed as a condition to participate in Medicare or Medicaid, some US hospitals may decide to eliminate their libraries in a misguided attempt to cut costs. However, another option is to use a circuit-rider librarian program.

A circuit-rider librarian is affiliated with a large resource library and provides library services for a fee to a number of small hospitals. Each week, the librarian makes rounds to participating hospitals to collect research requests. These requests are then researched at the sponsoring library.

E. Jean Antes, Robert Packer Hospital, Sayre, Pennsylvania, found that in addition to requests for clinical information, rural hospitals make a number of requests concerning administrative techniques, procedures, and requirements for hospitals.³⁰

The St. Joseph's Hospital and Medical Center, Paterson, New Jersey, offers a circuit-rider package deal. For \$5,000 a year, St. Joseph's provides a librarian to a neighboring hospital for six hours a week. In addition, the package includes 300 photocopies, unlimited loans of books and audiovisual materials from St. Joseph's collection, 50 computerized literature searches, and arrangements for interlibrary loan of materials not available at St. Joseph's.³¹

Evaluating Hospital Libraries

So far I have pointed out that hospital libraries can provide current information to users in a quick and cost-effective manner; they can provide a balanced perspective on medical issues; and they play a role in continuing education. In addition, a variety of services have been developed to improve information delivery. Emotionally, we as information providers feel that hospital libraries are useful but, unfortunately, this is not enough. The value of our activities must be demonstrated regularly by one means or another, including quantitative evaluations.

Margaret C. Hardy, Educational Resources Center, Dayton, Ohio; Josephine W. Yeoh, Riverside Methodist Hospital, Columbus, Ohio; and Susan Crawford, Washington University School of Medicine, note that this is a formidable task, since there are so many variables. The best alternative has been to rely on soft data from user-questionnaire feedback.³² In a past essay, I have chastised the medical-library profession for not adequately providing hard data dealing with the economic impact of its services.¹ This parallels a similar challenge I made to the research community to document the economic impact of its achievements.³³

I would like to discuss briefly the process of evaluating hospital libraries. F. W. Lancaster, professor of library science, University of Illinois, Urbana, distinguishes three levels of evaluation: effectiveness, cost-effectiveness, and cost-benefit analysis.³⁴ Effectiveness measures how well the library service satisfies

the users. In the past, research has mainly been done by gathering opinions through a questionnaire or an interview. More objective studies, such as measurement of success in quantitative terms, are needed.

Putting a dollar value on information services to determine cost-effectiveness is difficult. In a related study, Donald W. King, King Research Inc., Rockville, Maryland, and colleagues tried to calculate the value of the US Department of Energy database.³⁵ Scientists were asked to estimate the dollar value of time and equipment saved by reading journal articles and technical reports. Results showed that the average savings per reading were \$1,590 for a journal article and \$1,280 for a technical report. These figures were based on estimates in research and development. Specific studies calculating the value of information services in medical care are needed.³⁵

There are also classical studies, such as the 1964 survey by John Martyn, Aslib Research Department, London, UK, showing that there was as much as 20 percent unwitting duplication in published research.³⁶ No one to my knowledge has done an update.

Studies aimed toward justifying the expense of hospital libraries are just beginning to be done. One study by Paul B. Kantor, president, Tantalus, Inc., Cleveland, Ohio, obtained cost data from 32 academic libraries that revealed the unit costs of circulation, in-house reader use, and reference services.³⁷

Hardy, Yeoh, and Crawford, mentioned earlier, described recent awards by the National Science Foundation to study the value and effectiveness of information delivery in decision-making, productivity, and performance.³²

Richard De Gennaro, director of libraries, University of Pennsylvania, predicts that, in the future, "the excellence and usefulness of a library will be measured not only by the size and quantity of its collections but also by the range of resources that its staff is able to deliver to users by conventional and electronic means from a growing variety of sources. Users will no longer ask what the library has, but what it can provide."³⁸

Conclusion

So the trend for justification has begun, and none too soon in my opinion. When the

hard data begin to accumulate, I have no doubt that the benefits of hospital libraries will greatly exceed their costs. Nevertheless, until the hospital library becomes fully recognized as a legitimate part of the medical facility, cost-conscious administrators will use outdated models of library service to cut library budgets. But without first-class infor-

mation services, medical practice—especially in the hospital setting—will be impossible.

• • • • •

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