COMMENT AND OPINION

Challenges in health care information transfer: the role of hospital libraries*

Throughout the decade of the 1970s, health care expenditures in the United States increased at a rate significantly greater than the increase in the gross national product and in alarming excess of the overall cost of living. In 1980, the federal government began a series of new regulations to contain the cost of health care and to place greater financial accountability on hospitals, physicians, and nursing homes.

Federal regulation and its impact

Through the Omnibus Reconciliation Act (ORA) of 1980 and 1981, Congress directed that a new system for health care reimbursement be developed [1]. The Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 contained a section that set limits on allowable increases in governmental expenditures for Medicaid and Medicare and made provision for the development of a prospective payment system [2]. In 1983, the system was implemented in an amendment to the Social Security Act, changing the basis of payment for hospital inpatient services from retrospective cost based to predetermined diagnosis based. Though the system was initially used only for Medicare inpatients in acute care hospitals, it has subsequently become the basis for virtually all reimbursement and has had a far-reaching effect on the health care industry.

Coinciding with implementation of prospective payment and changes in Medicare payment policies was the addition to the Social

Security Act of the Consolidated Omnibus Reconciliation Act of 1985 (COBRA) [3] and its 1986 amendments in the Omnibus Reconciliation Act (OBRA) [4], which affected payment of graduate medical education (GME) costs. Medicare has historically paid a share of the cost of approved medical education programs; however, regulations promulgated by the Health Care Financing Administration (HCFA) stated that, henceforth, the GME payment would be determined by an audit, which would provide for a hospital-specific base period per resident amount. This amount was calculated by dividing a hospital's allowable costs for GME in fiscal year 1984 by its number of interns and residents in the same year. The final rule, issued September 29, 1989, was retroactive to July 1985 [5]. Hospitals would be required to repay to the government 25% of any amount over the base-year audit.

The proposal to eliminate the hospital library as a federal requirement for Medicare and Medicaid reimbursement was first proposed by HCFA in the *Federal Register* in 1980 [6]. In the September 1, 1983, *Federal Register*, HCFA stated that maintenance of a hospital library was "an activity not within the scope" of a direct educational activity, but rather a "normal operating cost" of a hospital [7]. In 1984, the Department of Health and Human Services dropped its requirement that hospitals maintain a library staffed with a certified medical librarian to be eligible for Medicaid and Medicare reimbursement [8].

A result of these cost-containing measures by the government has been that hospital administrators have been compelled to look closely at all aspects of their operations in an effort to determine where

they can cut back without affecting patient care. Hospital libraries have become especially vulnerable, as most are non-revenue-generating departments. Recent studies attempting to measure the impact of changing health care economics on hospital libraries have indicated that staffing, service, collections, and perceived value and importance of hospital libraries have been adversely affected.

A survey sent out in April 1988 under the auspices of the Michigan Health Sciences Libraries Association [9] showed that 32% of the eighty-two respondents reported having fewer full-time equivalents (FTEs) in 1988 than in 1985. More than half of these positions were lost through layoffs. Although 61% of the libraries reported more funds in their materials budgets in 1988 than in 1985, the increases were less than a quarter of what was necessary to keep pace with the inflation rate for medical books and journals during the period surveyed [10]. Michigan librarians also reported negative changes in position classification, reporting relationships, and service levels [11]. Forty percent also reported that reimbursement for professional travel, meetings, and continuing education had been decreased or eliminated.

The Medical Library Association's *Ad Hoc* Committee on the Position of Hospital Libraries conducted a national survey of both large and small hospitals in December 1988. Sixty-five percent of the 127 hospitals responding cited major negative changes. Thirty-seven percent reported budget cuts and layoffs, 18% reported general reorganization, 6% downsizing, and 4% budget and hiring freezes [12].

A five-year compilation of hospital library trends in the Pacific

Northwest Region suggested that a three-year decline in on-site hospital libraries resulted from closures and mergers [13]. A distinct trend that emerged was "down-staffing": replacing librarians with clerical staff who have minimal training or time for library service. In the Pacific Southwest Region's 1989 update of a 1983 survey, eleven hospitals no longer had a separate hospital library. The survey also reported a 12% decrease in the number of professionally managed libraries, as well as a drop in the average number of FTEs [14]. The New York State Department of Health's recent decision to eliminate the requirement that hospitals maintain a library to be eligible for federal funding probably will result in the elimination of more hospital libraries [15].

Challenges and opportunities

All this is taking place in a world where medical literature is doubling every five years [16]! Physician surveys reveal that doctors spend three hours each week reading medical journals. To keep up with the total volume of biomedical information, physicians would have to read and comprehend 13,000 articles per hour [17]. A practitioner trying to keep up with the medical literature by reading two journal articles per day would, in the course of one year, fall fifty-five centuries behind [18]!

How can health care professionals keep from drowning in a sea of information? How can they stay abreast of current information on the management of disease? How can administrators, planners, and financial staff keep up with the rapidly changing health care field? Where can they obtain the necessary information for a cost-effective response to the competitive health care environment?

In a *New York Times* article, Peter Lewis wrote,

The company that can best gather and evaluate information will have an edge. In the vanguard of information technology, today's librarians are as likely to be experts in workstations, networking, communication protocols, electronic imaging, and fiber optics as they are in books and manuscripts. The information technologies and techniques now being explored by libraries are likely to serve as models for business in the years to come [19].

The information age means a new surge of technology for libraries, and a new value to librarians as a resource.

The hospital library of the '90s is not a warehouse but the source of vital patient information transfer. Its main mission is providing high quality information for patient care to physicians, nurses, and others who need relevant clinical information for complex decision making. It is an educational facility where librarians teach how to access online versions of MEDLINE®† and other databases, how to search using CD-ROM technology, how to properly cite references in a paper.

Hospital librarians can also supply hospital management staff with information critical for ongoing management. They can be a source of information useful in making decisions in marketing, purchasing, and restructuring. Professional librarians function as change agents and problem solvers, and are a valuable resource because they provide access to another valuable resource—information that outside consultants would charge management thousands of dollars to supply.

Hospital librarians were participants in total quality management long before the term was coined. Networking with other libraries, quality bibliographic searching, document delivery, and quick turnaround time at minimum or no

† MEDLINE is a registered trademark of the National Library of Medicine.

cost have long been the norm in most hospital libraries. Librarians contribute to effective management of hospital budgets by coordinating book, journal, audiovisual, and software purchases.

Hospital librarians, among the first to use computer systems, can also play a pivotal role in increasing the effectiveness of information management systems. A computer-literate librarian can aid greatly in selecting and installing institution-wide access to data for clinical and management decision making.

Risk management is a top priority in health care today. In a litigious society, prevention is cost-effective. The American Medical Association requires physicians to obtain risk management credits for relicensure. The hospital library provides continuing education opportunities and current awareness to health professionals. Malpractice suits have been avoided, won, or lost on the basis of MEDLINE searches provided by a trained hospital librarian searcher. "It is not intended that physicians must be current on all phases of medical progress, but failure of a physician to research the literature breaches the standard of care" [20]. In *Harbeson v. Parke-Davis*, the court said, concerning "knowing that he doesn't know": "With the demand of their profession, no one can expect doctors to have all material information stored in their minds. A literature search will put a physician on notice of these risks" [21].

Another important part of the health care arena is quality assurance (QA). Important elements of QA are timely and accurate provision of information. Hospital librarians serve as knowledgeable guides through the maze of resources and as liaisons to networks with other libraries for resource sharing. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has stated in its 1991 *Accreditation Manual for*

Hospitals, "quality patient care is the heart of the Joint Commission's mission" [22] and has reinstated the hospital library as a key requirement for accreditation [23]. While the absence of a hospital library would not necessarily result in the loss of accreditation, the loss of access to information would affect the quality of patient care, which is the focus of the accreditation process. Requiring a hospital library also has been supported by the American Medical Association House of Delegates [24].

Prospective payment requires efficient, effective care to ensure the shortest possible length of stay. State-of-the-art information from the hospital library plays an essential role in today's environment where quality patient care cannot be compromised. King and others have demonstrated the value of quality information to patient care and its impact on case management [25].

Libraries can also be involved in direct patient care through patient education programs. Patient education, properly carried out, can be a means of reducing medical costs and improving the quality of care. The development of a patient education library allows the librarian to interact professionally in a clinical environment and to make a direct contribution to patient care. A consumer health information service can be an offshoot of patient education. Providing health information to the hospital's community at large with a health information hot line is an excellent public relations tool.

Conclusion

The role and presence of the hospital librarian extends well beyond the confines of the library. The librarian must be cognizant of the hospital's philosophy of care and vision for the future. As a professional, it is incumbent upon the

librarian to be aware of current and projected programs and technologies with which the hospital will be involved. This can only be achieved when the library professional becomes a visible force outside the library, interacting with hospital staff and employees, serving on committees, and representing the hospital in the community.

The entire universe of information is available to help health professionals and hospital administrators successfully manage the most challenging job of all—the provision of health care. The professional hospital librarian is the key to guide, direct, and aid in performing that task.

Carole M. Gilbert, M.S.L.S.
Director, Library Services
Helen L. DeRoy Medical Library
Providence Hospital
16001 West Nine Mile Road
P.O. Box 2043
Southfield, Michigan 48037

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Scholarly publishing

Lelde Gilman's spirited piece in the January 1991 issue of the *Bulletin* deserves additional comment [1]. She takes on the publisher (the CEO of a communication conglomerate with an eye on corporate mergers and large profit margins); the basic scientist scholar who wants "to know with certainty"; the clinician—the provider seeking "access to a description of a high standard of care"; and—last and most certainly least—the librarians, who love people, do not want to make quality or value judgements, and get mad when they can't buy everything anyone asks for [2].

"Now," the writer asserts, they also "want to get even with the publishers for putting them in this awful position" [3]. Gilman wrote her comments to counter the idea of the "commons" proposed by Gary Byrd [4]. One must agree that human nature, alas, is a formidable barrier to achieving such an ideal!

I submit, however, that the academic community should not get off so lightly. Our current system of scientific publishing is a supply-side-oriented system—the supply of manuscripts dictates the volume of published articles. In addition, the rate of increase among scientists and engineers in institutions of higher learning in recent years has been three times that of the general population (Table 1). There will be no decrease in the supply of manuscripts; hence, we can hardly expect a downturn in the volume of published articles.

However, there is little evidence thus far to support the relationship between the existence of a journal or a paper and user demand for the information itself. Rather, what we witness here is an oversupply created by academic institutions and funding agencies that view the publication activities of researchers as a core component of a researcher's scientific or academic merit. Tenure, promotion, salary increases, and funding for research are still linked to the number of citations. This trend has given rise to the "salami effect" (the slicing of scientific writing into smallest publishable units) and much of the needless proliferation for which libraries pay so dearly. Libraries are also not helped by academic accreditation bodies' continued emphasis on quantity of library resources, rather than ease of access and quality of service.

Some schools are beginning to think in terms of reforms, which might include qualitative assessments and a ceiling on the number of publications that may be considered for promotion; University of New Mexico (UNM) and Harvard are among them. Broader acceptance of these practices may limit the drive for increasing quantities of publications.

Quality filtering, however, is not a new idea. Franz Ingelfinger, former editor of the prestigious *New England Journal of Medicine*, had a tongue-in-cheek proposal for librarians more than two decades ago that bears reexamination:

Let us face it. There are good journals, poor journals, and in between journals. In addition, there are hopeless journals. Although there may be poor articles in good journals, and vice versa, it is, on the whole, not too hard to classify journals into A, B, C, or D categories. Take my own field, gastroenterology. I do not think this field has any class A journals, but there are two sound B journals—*Gastroenterology* and *Gut*. ... In the field of internal medicine, the *Journal of Clinical Investigation,* the *New England Journal of Medicine,* and the *American Journal of Medicine* might be ranked as A; the *American Journal of the Medical Sciences* as C; with most of the remaining well-known journals of internal medicine as exhibiting varying degrees of B-ness. ...

I am proposing that it is the duty of medical libraries and their affiliated universities to classify and label journals as belonging in the A, B, C, or D categories. At first, each library, with the help of a committee from its medical school, would create its own list of good and bad, but I suspect that evaluation of many journals would prove quite consistent from library to library. ...

Journals, once so categorized, would be displayed according to their rank. With respect to current issues, the A journals would come first, would be most readily accessible ... B journals would appear on the B rack and so on down. D journals could be relegated to an inconspicuous area, available but occupying space and prominence commensurate with their rank.

... Of course, there would be an outcry, but this is only a matter of custom. After all, we grade butter, we grade baseball teams, we grade hotels, and we certainly don't hesitate to grade people. If we can tell a medical student he is a C, it is high time we did the same to the journals from which he is supposed to learn. ...

The greatest benefit I envision is that with the passage of time many C and