
A survey of health sciences libraries in hospitals: implications for the 1990s

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In response to an expressed need for comprehensive data on health sciences libraries in hospitals, the American Hospital Association (AHA) conducted a survey of all U.S. registered hospitals in 1990. The response rate was 57%. Results showed that 2,167 hospitals (31.6% of all U.S. registered hospitals) had on-site libraries that met four definitional criteria. Survey results also indicated that hospitals use diverse resources and approaches to provide information services to a wide array of health care providers and consumers. These baseline data, combined with an assessment of key environmental factors affecting hospitals, can provide guidance to hospital libraries as they face the challenges of the 1990s. The AHA has added the health sciences library to services tracked in its annual survey of hospitals; additional research opportunities in this area remain.

For many years, health information professionals have expressed a need for basic data about health sciences library services in hospitals. The need has become more acute in the 1990s, as librarians are being challenged to address changing patterns and practices in health care during a period when reform of the U.S. health care system is a major concern. To address these changes and chart a course for future information services, baseline data on current services are needed, as well as information about the environment in which hospitals are operating.

BACKGROUND

In the 1980s, hospital librarians began to express concern about the future of library services within hospitals. As hospitals adapted to a new payment system and faced financial pressures that resulted in mergers, closings, and restructuring, libraries experienced closings, downsizing, and budgetary constraints [1-3]. As the regulatory environment changed, librarians expressed concern about the elimination of the federal requirement that hospitals maintain a medical library to be eligible for Medicare and Medicaid reimbursement [4]. Yet, no data were available about

the universe of health sciences libraries in hospitals. It was not even possible to determine a basic fact, such as the number of hospitals that had libraries.

In 1962, the American Hospital Association (AHA) conducted the first significant national study of hospital libraries [5]. The survey questionnaire, mailed to a representative sample of nonfederal short-term hospitals, was intended to document the number of hospitals with professional libraries and to enable the development of library profiles. On the basis of this survey, it was estimated that 3,192 hospitals had professional libraries. In 1969, the first periodic survey of health sciences libraries in the United States was conducted under a grant from the National Library of Medicine (NLM) [6]. AHA conducted the hospital library portion of the survey, which identified 2,002 health sciences libraries in hospitals. A second survey, conducted under the grant in 1973, identified 1,957 health sciences libraries in hospitals [7]. NLM awarded another grant to Case Western Reserve University in 1979 for a survey that identified 1,802 hospital libraries; that was the last national survey [8]. Since that time, a number of state and regional surveys have been conducted on a one-time or ongoing basis, but these were not representative of the universe of health sciences libraries [9].

SURVEY METHODOLOGY

Aware of the need for good baseline data, the AHA Resource Center proposed that the association undertake a comprehensive survey as part of its hospital data collection activities. The proposal was approved and funded by AHA in late 1989. Guidance in developing the survey instrument was provided by an advisory group of hospital administrators, hospital librarians, and representatives of the Medical Library Association (MLA), NLM, and the Department of Veterans Affairs. AHA staff reviewed previous national surveys, state and regional surveys, and the Association of Academic Health Sciences Library Directors' annual survey. AHA's Hospital Data Center, along with Resource Center staff and the advisory group, designed the survey content, and the Hospital Data Center distributed the questionnaire and tabulated the results.

The survey questionnaire was mailed to 6,853 U.S. registered hospitals in January 1990. A follow-up questionnaire was mailed to nonrespondents in March. In conformance with AHA policy, the mailing was directed to chief executive officers, who were asked to pass it on to the individuals responsible for health sciences library services. To encourage a high response rate, AHA publicized the survey widely within the health sciences library field and made follow-up telephone calls to known hospital libraries that did not respond to the first two mailings. The association received 3,890 responses, for a response rate of 57%.

In any survey, definition of key terminology is critical. For the purposes of the AHA survey, the American National Standards Institute standard Z39 definition of a library was selected:

[an] entity that provides all the following: (1) an organized collection of printed or other library materials, or a combination thereof; (2) a staff trained to provide and interpret such materials as required to meet the informational . . . or educational needs of a clientele; (3) an established schedule in which services of the staff are available to clientele; and (4) the physical facilities necessary to support such a collection, staff, and schedule [10].

In the context of the AHA survey, this definition applied to health sciences libraries only.

Hospitals that had a library on site that met all four criteria were asked to complete the entire survey. Hospitals that did not have a library on site that met all four criteria were asked to answer three questions not asked of the first group. Respondents did not consistently follow directions, and some completed inappropriate portions of the survey. Only responses from hospitals with on-site libraries meeting all four criteria were included in the detailed results. In many

instances, respondents did not answer all the questions.

To ensure that the survey would not be excessively burdensome to complete, the extent of detail requested about most processes or services was limited. Service to hospitals by health sciences libraries in academic medical centers was not assessed because of the complex and individualized relationships involved.

RESULTS

In May 1991, results of the survey were reported in the *Survey of Health Sciences Libraries in Hospitals—1989: Executive Summary*, distributed by AHA to chief executive officers and librarians in responding hospitals and members of MLA [11]. In conformance with AHA policy, the date in the report title refers to the reporting period for the data collected.

Of the hospitals responding, 2,167 (31.6%) of all U.S. registered hospitals reported having a library on site that met all four criteria. Of the 1,671 hospitals without libraries meeting the four criteria, 863 (21.6%) reported having an on-site facility that met one or more criteria. An additional 696 hospitals reported no on-site library facilities or services, and 112 hospitals did not define the level of service available. A total of 52 respondents returned but did not complete the questionnaire.

Of the 1,671 hospitals that reported either no on-site library or libraries that did not meet all four definitional criteria, many reported access to library services through other sources. Contract services were reported by 345 hospitals, formal arrangements with academic medical center libraries by 407 hospitals, shared services with another hospital by 184 hospitals, and services through a health care system by 240 hospitals. In addition, 182 hospitals indicated that on-site library services had been discontinued. Financial constraints were the reason cited most frequently for discontinuing service.

Although data from previous national surveys are not comparable statistically—either with one another or with AHA data—it is interesting to note that the AHA survey, which applied the most rigorous definitional criteria for a health sciences library, identified more hospital libraries than all but the 1962 survey (Table 1). When hospitals with libraries that did not meet all four definitional criteria are included, 3,030 (44%) hospitals have some level of on-site service or facility. Furthermore, of the 696 hospitals that reported no on-site library service or facilities, 380 reported access to service through contract services, formal arrangements with academic medical center libraries, shared services, or service through a health care system. This brings the total number of hospitals reporting access to health sciences library and infor-

Table 1
Percentage of hospitals with libraries

Survey	Number of hospital libraries	Number of hospitals	% of hospitals with libraries
1962	3,192 (estimate)	7,028*	45.4
1969	2,002	7,144*	28.0
1973	1,957	7,123*	27.5
1979	1,082	6,988*	25.8
1989	2,167	6,853†	31.6
1990‡	2,544	6,649*	38.3

* Source: *Hospital Statistics*.

† Universe at time survey was released.

‡ First year AHA tracked this data in its annual survey of hospitals.

mation services to 3,410 (49.7%). Had all academic medical center services been factored in, as well as information from nonresponding hospitals, the level of service likely would be higher still.

Table 2 shows the breakdown of hospital libraries by state. Breaking down the data by ownership and control, 64.7% of federal hospitals, 20.4% of state and local hospitals, 12.2% of nongovernment not-for-profit hospitals, and 8.4% of investor-owned hospitals, have libraries.

Respondents reported a wide variety of library users, including medical and technical hospital staff, patients and families, medical and other students, and other hospitals. Nearly 50% indicated that they provided service to members of the community. Respondents also reported considerable variety in services provided, as shown in Table 3.

Table 4 provides information about library managers in health sciences libraries in hospitals.

Asked if the library formally participates in the hospital's quality assurance program, 740 libraries (34.1%) said yes. Asked how they measure the impact of library services on patient care, respondents from 858 libraries gave a variety of answers. This is an emerging area of interest in libraries; a number of respondents indicated that they did nothing to measure the impact. Many respondents described surveys and other evaluation mechanisms that measure user responses to services. Some respondents described innovative approaches, including querying users about the planned use of information (e.g., patient care, research) and about whether information they received influenced patient care management. Some respondents reported implementing aspects of the King study within their institutions [12].

ENVIRONMENTAL ASSESSMENT

The challenges facing health sciences libraries in hospitals mirror and are shaped by the challenges facing hospitals. For health sciences libraries to survive and

Table 2
Geographic summary (hospitals with libraries on site that meet all four criteria)

State/associated area	Number	% of respondents	% of hospitals in the state/associated area with libraries
Alabama	31	1.4	22.1
Alaska	2	0.1	7.4
Arizona	30	1.4	32.3
Arkansas	18	0.8	18.4
California	207	9.6	36.8
Colorado	30	1.4	31.2
Connecticut	38	1.8	59.4
Delaware	8	0.4	57.1
District of Columbia	9	0.4	50.0
Florida	72	3.3	24.6
Georgia	39	1.8	19.0
Hawaii	10	0.5	38.4
Idaho	16	0.7	32.7
Illinois	109	5.0	42.4
Indiana	51	2.4	37.8
Iowa	30	1.4	21.9
Kansas	26	1.2	16.4
Kentucky	33	1.5	26.8
Louisiana	27	1.2	15.7
Maine	25	1.2	54.3
Maryland	42	1.9	50.0
Massachusetts	85	3.8	50.3
Michigan	86	4.0	41.7
Minnesota	34	1.6	20.0
Mississippi	17	0.8	14.3
Missouri	47	2.2	28.8
Montana	11	0.5	17.2
Nebraska	13	0.6	12.3
Nevada	5	0.2	15.2
New Hampshire	21	1.0	48.8
New Jersey	68	3.1	55.7
New Mexico	14	0.6	23.0
New York	167	7.7	52.8
North Carolina	56	2.6	35.4
North Dakota	11	0.5	19.0
Ohio	112	5.2	48.9
Oklahoma	24	1.1	17.1
Oregon	28	1.3	35.9
Pennsylvania	160	7.4	53.2
Rhode Island	13	0.6	65.0
South Carolina	17	0.8	18.7
South Dakota	11	0.5	16.7
Tennessee	30	1.4	19.0
Texas	65	3.0	12.0
Utah	14	0.6	26.9
Vermont	12	0.6	63.1
Virginia	53	2.4	39.0
Washington	43	2.0	37.7
West Virginia	19	0.9	28.8
Wisconsin	62	2.9	41.6
Wyoming	11	0.5	34.4
Puerto Rico	4	0.2	6.1
U.S. Virgin Islands	1	0.0	50.0
Total	2,167	100.0	31.6*

* Total respondents represent 31.6% of all U.S. registered hospitals.

thrive in the turbulent 1990s, they must understand key environmental issues affecting hospitals. According to *A Tradition of Service: Environmental Assessment 91/92*, "understanding change and developing a process and culture that is receptive to change will be

Table 3
Library services

Service	Number	% of respondents reporting this service
Reference	2,120	97.8
Database searching (mediated)	1,795	82.8
Circulation	1,995	92.1
Interlibrary lending	2,000	92.3
Interlibrary borrowing	2,095	96.7
Course reserves (materials reserved for use by students)	817	37.7
Clinical librarian	339	15.6
Patient/consumer education	818	37.7
End-user searching	670	30.9
End-user searching training	579	26.7
Audiovisual distribution	1,286	59.3
Audiovisual production	240	11.1
Teleconference support	360	16.6
Microcomputer center	325	15.0
Computer-assisted instruction (CAI)	317	14.6
Newsletter	636	29.3
Learning resource center	400	18.5
Literature alerting service (e.g., current awareness, selective dissemination of information)	1,459	67.3
Records management	386	17.8
Indexing	356	16.4
Abstracting	146	6.7
Archives program	276	12.7
Bibliography preparation	1,227	56.6
User education (bibliographic instruction)	1,093	50.4
Literature attached to chart (LATCH)	206	9.5
Preservation/conservation	306	14.1
Centralized purchasing of books and journals	1,289	59.5
Other	137	6.3

the keys to success for today's hospitals" [13]. Key trends identified in AHA's environmental assessment include

- economics
 - slow economic growth
 - falling inflation and interest rates
 - health care expenditures continuing to rise relative to gross national product
- demographics
 - population growth disparities across regions
 - poverty, lack of health insurance
 - increase in number of children
 - increase in number of elderly
 - AIDS
- human resources
 - competition for nonhealth personnel
 - nursing personnel shortage
 - allied health personnel shortage
 - changes in practice of medicine
- technology
 - new technology—less invasive, but high cost
 - increase in computer usage
 - ethical issues
- finance and payment
 - pressure to reduce expenditures

Table 4
Characteristics of the library manager

Level of education	Number	% of respondents
High school diploma	221	10.2
Associate's degree	138	6.4
Bachelor's degree	311	14.4
Master's degree in library/information science	1,163	53.7
Master's degree in another field	109	5.0
More than one master's degree	154	7.1
Ph.D. in library/information science	11	0.5
Ph.D. in another field	22	1.0
More than one Ph.D.	2	0.1
No response	36	1.6
Total	2,167	100.0
Salary Range		
Below \$20,000 per year	572	26.4
\$20,000–29,999 per year	775	35.7
\$30,000–39,999 per year	564	26.0
\$40,000–49,999 per year	112	5.2
\$50,000–59,999 per year	28	1.3
\$60,000 or more per year	26	1.2
No response	90	4.2
Total	2,167	100.0
Length of Tenure		
Less than 2 years	507	23.4
2–5 years	636	29.4
6–10 years	410	18.9
More than 10 years	590	27.2
No response	24	1.1
Total	2,167	100.0

- shift in emphasis to control of outpatient care and physician services
 - growth of managed care plans
 - blurring of distinctions between traditional insurance plans and health maintenance organizations (HMO)
 - pressure on HMOs and preferred provider organizations to demonstrate financial value as well as quality
 - government policies
 - increased scrutiny of all hospital activities
 - changes in the way medical malpractice cases are resolved
 - environmental regulation—cost and training implications
 - focus on identifying quality-of-care problems and sharing quality and cost data with consumers
- Hospitals are responding to these trends in a number of ways. For example [14]:
- They are expanding delivery of preventive, ambulatory, long-term care and specialty services. The role of the hospital will continue to change in the 1990s as increasing emphasis is placed on delivery of primary care services.
 - Planning, marketing, and managed care functions are evolving. A hospital's success in the 1990s will hinge on the abilities of its planning and executive

staff to think strategically, to respond to community concerns, and to translate strategy into action.

■ Quality is being measured and managed. Hospital and payer groups, along with private researchers, will continue efforts to develop effective measures of quality; such efforts will stress outcome-related measures.

■ Hospitals are facing accountability challenges. Consumer groups, public payers, businesses, and private insurers are questioning hospital executives about the costs, quality, and appropriateness of their services and about the benefits the hospital provides to the community. Executives face the challenge of measuring their organizations' strategies and of demonstrating that their hospitals are sensitive to the needs of consumers, businesses, and other payers for high-quality, cost-effective care.

■ Hospitals are revisiting the overriding mission of community hospitals—ensuring the good health of all community residents. Solid relationships with community organizations, business groups, and other providers will ensure that community residents are well served.

IMPLICATIONS FOR HOSPITAL LIBRARIES

The environmental issues affecting hospitals and the responses to those issues pose significant challenges to hospital staffs at all levels. Health sciences libraries can provide information support to help shape decisions and thus are positioned to be active partners in managing the challenges of the 1990s. Survey results indicate that hospital libraries serve a number of users in whom the hospital has a vested interest and can be assets: physician recruitment, retention, and service development; nurse recruitment and retention; continuing education and skill development of technical staff; and dealing with fundamental work force literacy issues. Libraries also are positioned to assist in patient and consumer health education programs.

Advances in technology mean that library services can be adapted to outpatient or ambulatory care facilities at remote sites. Libraries also can assist in meeting the information needs of trustees. As information managers, librarians often use technology in innovative ways and can contribute to the development and implementation of integrated information systems within hospitals. Hospital librarians have a rich tradition as collaborators and cooperators and can serve as role models as hospitals move toward cooperative and collaborative ventures.

Hospitals and hospital libraries are facing difficult and sometimes painful decisions to reallocate resources, to revisit service audiences, to identify and develop new income sources, and to restructure and sometimes eliminate services. Indeed, the challenge is to reform the health care system. Yet this is also a

time of rededication to missions of patient care and community service. Hospitals and hospital libraries are challenged to document the quality and cost-effectiveness of patient care and the level of contribution to the community.

CONCLUSION

The AHA survey of health sciences libraries in hospitals provides baseline data on the status of library and information services in hospitals. It also points to a number of areas where additional research would be fruitful. Longitudinal studies would enable researchers to track changes in hospital libraries as they function in a changing environment. A study of the unique relationships between academic medical center libraries and hospitals could provide valuable insights not addressed by existing studies. Libraries' responses to and participation in hospital quality management programs are worthy of additional study. Perhaps most critical is the need to measure the impact of library services on clinical care and patient outcomes.

The American Hospital Association has begun to collect longitudinal data on the presence of health sciences libraries through its annual survey of hospitals. In the 1990 survey, 2,544 hospitals (38.3%) reported having libraries [15].

While the survey data presented in this paper reflect only a snapshot in time, it is clear that hospital libraries play diverse roles in meeting the information needs of the health care community and are active partners in achieving the goal of high-quality patient care.

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