The changing status of hospital libraries 1984 to 1989: characteristics and services in Region 7 of the National Network of Libraries of Medicine*†

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Economic and political factors have had far-reaching effects on hospital libraries in the last decade, but quantitative evidence of these changes is not readily available. Through periodic evaluation surveys within its multistate region, the Pacific Southwest Regional Medical Library Service, the Regional Medical Library for Region 7 of the National Network of Libraries of Medicine (formerly the Regional Medical Library Network) has monitored hospital library changes over the years. This paper compares data from a 1989 survey with similar information gathered in 1984. Longitudinal analysis was performed on responses from 188 hospitals that responded to both the 1984 and the 1989 survey, as was cross-sectional analysis of all responses from both surveys. Results showed a small decrease in the number of hospitals with separate library collections. Staffing patterns had changed considerably, with a drop of approximately one entire full-time salaried equivalent per library and a decrease in libraries managed by a librarian with an M.L.S. The libraries that provide all of a set of predefined core services and resources decreased from 61% in 1984 to 44% in 1989. Libraries with M.L.S. staff were more likely to have core services than those without professional staff.

INTRODUCTION

In the last decade, the rising cost of providing health care, coupled with limitations on hospital income caused by government and insurance company restrictions, has decreased the money available to support library services in many institutions [1–3]. At the same time, spiraling costs for publications and increased use of sophisticated technology have raised the potential costs for even the smallest hospital library [4]. As a result, many hospitals have closed their libraries or cut library staff and services in an attempt to stay in business. While anecdotal evidence of hard times for libraries is abundant, quantitative docu-
Table 1
Existence of libraries in hospitals: longitudinal analysis (n = 187)

<table>
<thead>
<tr>
<th>Library with collection and full- or part-time staff</th>
<th>1984</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library with collection but no staff</td>
<td>146(78%)</td>
<td>144(77%)</td>
</tr>
<tr>
<td>No centralized collection</td>
<td>5(3%)</td>
<td>11(6%)</td>
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</table>

The existence of libraries in hospitals has been of interest to many researchers, policy makers, and hospital administrators. A recent survey by Glitz et al. [1] reported that 77% of U.S. hospitals had libraries in 1984, compared to 78% in 1989. This longitudinal analysis, which was conducted by the Pacific Northwest Regional Health Sciences Library Service (PNRHSLS), provides detailed statistics on staffing and materials budgets, but the population studied was small and restricted to a single state [2]. The Pacific Northwest Regional Health Sciences Library Service (PNRHSLS), which has been compiling data on hospital libraries in its region of the National Network of Libraries of Medicine (NN/LM) for several years, covers a much larger population across several state lines. However, its data, most recently from a 1990 survey, have been neither analyzed nor compared with earlier years to provide detailed evidence of changes [6]. A recent effort by the American Hospital Association (AHA) to survey U.S. hospital libraries comprehensively should provide a better picture of present conditions and serve as a useful basis for future comparison [7].

For the past twenty years, the Pacific Southwest Regional Medical Library Service (PSRMLS) has been building an important collection of baseline data on health sciences libraries within its region. This collection can provide some quantitative information on the status of hospital libraries [8-10]. PSRMLS serves as the Regional Medical Library (RML) for Region 7 of NN/LM (formerly the Regional Medical Library Network), which encompasses Arizona, California, Hawaii, Nevada, and the Pacific Basin. Starting in 1969, data were gathered through periodic library evaluation surveys conducted by PSRMLS. Through data collection and comparisons, Region 7 has been able to monitor the changes in hospital libraries over the years. This paper compares data from the most recent PSRMLS survey, conducted in 1989, with information gathered in 1984 to present a picture of how Region 7 hospital libraries have changed. As well as giving an overall description of library characteristics and staffing, the paper describes the status of certain core library services and resources first identified in the 1984 survey and focuses on some new services that evolved over the study’s five-year span.

METHODOLOGY

A written questionnaire was designed to gather data comparable to those elicited by the 1984 survey and to collect further information on new services and resources, interlibrary lending, and services to unaffiliated health professionals. A draft questionnaire was sent to all regional resource libraries and librarian members of the PSRMLS Regional Advisory Committee (RAC) for review and comment, with special emphasis on the questions added in 1989. The revised questionnaire was mailed to each of the 1,080 libraries on the PSRMLS mailing list in August 1989. This mailing list includes hospital libraries, the eleven resource libraries, and the almost 300 nonhospital health science libraries in Region 7. To improve the response rate, the survey was kept short. A follow-up letter was sent to library staff who had not responded by October 1989. Because of the longitudinal value of responses from libraries that had responded in 1984, a further telephone follow-up for this group was conducted in December 1989. As a result, 416 libraries completed the survey.

Survey results, including partially answered questionnaires, were then entered into a database management system. Data cleaning was performed, and errors were corrected before the data were analyzed.

RESULTS

The authors received 416 responses, compared with 439 in 1984. Of the current respondents, 333 were hospital libraries, compared with 367 in 1984 (this total of 367 differs from the number given in the final report published in 1985 because a small number of duplicate responses were eliminated). This paper presents results from two types of analyses. The terms longitudinal and cross-sectional have been used throughout this paper. A longitudinal analysis (panel study) was made of the responses of 188 hospital libraries participating in both the 1984 and the 1989 surveys to ensure comparability of libraries investigated over the five-year period. A cross-sectional analysis (trend study) was made by comparing data from all 333 hospital libraries that responded to the 1989 survey with data from the 367 that responded in 1984. This second analysis provides more descriptive information on characteristics of hospital libraries five years ago and in 1989, because a much larger number of libraries is included.

General characteristics of the hospital library

A longitudinal comparison was first made of general library characteristics: the existence of a centralized library collection, the number and type of staff, and the types of library users. Because of missing responses to some questions, frequencies do not always total 188 in Tables 1-7. The 1984 survey identified 182 institutions that have a separate, central collection; as of 1989, eleven of those no longer had a cen-
Table 2
Existence of libraries in hospitals: cross-sectional analysis

<table>
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<th>1984 (n = 367)</th>
<th>1989 (n = 333)</th>
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<tr>
<td>Library with collection and full- or part-time staff</td>
<td>76%</td>
<td>81%</td>
</tr>
<tr>
<td>Library with collection but no staff</td>
<td>19%</td>
<td>15%</td>
</tr>
<tr>
<td>No centralized collection</td>
<td>5%</td>
<td>4%</td>
</tr>
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Table 3
Audiovisual collections in hospital libraries: cross-sectional analysis

<table>
<thead>
<tr>
<th>Number of titles</th>
<th>1984 (n = 367)</th>
<th>1989 (n = 333)</th>
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<tbody>
<tr>
<td>0</td>
<td>1%</td>
<td>30%</td>
</tr>
<tr>
<td>1–100</td>
<td>59%</td>
<td>36%</td>
</tr>
<tr>
<td>101–200</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>201–400</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>More than 400</td>
<td>18%</td>
<td>19%</td>
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Central collection (a decrease of 6%). On the other hand, five hospitals that did not have a central collection in 1984 did have one in 1989 (an increase of 3%). That comes to a net loss of 3% over the last five years (Table 1).

In 1984, 71% (130) of the libraries with staff were managed by librarians, i.e., staff with an M.L.S.; in 1989, this figure was 59% (108), a 12% decrease. The average number of degreed librarians per library went from 0.82 in 1984 to 0.63 in 1989. Overall staffing patterns had also changed. A paired t test on the longitudinal analysis of full-time salaried equivalents (FTEs) in hospital libraries showed an average decrease of 1.01 FTE, from 2.19 in 1984 to 1.18 in 1989. The standard error of the decrease was 0.27; the decrease was statistically significant at the 1% level.

The data were also analyzed for a cross-sectional comparison between the responses to the 1984 survey (367 libraries) and those of the 1989 survey (333 libraries). Results are given only in percentages. Table 2 shows the changes in the number of separate hospital libraries, both with and without their own staff, over the five-year period. The cross-sectional analysis showed a 2% decrease in the libraries managed by degreed librarians, from 69% in 1984 to 67% in 1989. A slight drop was seen in the average number of degreed librarians per library, from 0.76 to 0.75. A two-sided z test gave a P value of 0.94. There was no, therefore, a statistically significant change in the average number of M.L.S. staff members per library over the five-year period. Overall staffing patterns also changed, from an average of 2.09 FTEs per library in 1984 to 1.27 in 1989 (a change of 0.82).

A pattern emerged when the longitudinal results were compared with the cross-sectional results. Most of the changes in the library characteristics were consistent for both methods of analysis. One noticeable difference, however, was the percentage of libraries with degreed librarians in charge: The cross-sectional results showed only a 2% decrease, but the longitudinal results showed a 12% decrease. Moreover, the average number of M.L.S. degrees per library appeared to decrease in the longitudinal analysis but was virtually unchanged in the cross-sectional analysis. This suggests that the longer-established libraries, those responding to both surveys, showed a decrease in professional staff being in charge. Both cross-sectional and longitudinal analyses show a clear drop of one FTE in all libraries over the five-year period studied. This is a much larger overall decrease than that found in the Stevens study, where the average loss was only 0.15 FTE. However, those Michigan libraries specifically reporting staff cuts showed an average decrease of 1.23 FTE, considerably higher than for Region 7. Future PSRMLS surveys should perhaps also record staffing changes specifically for libraries that experience an actual loss or gain in personnel.

One final characteristic analyzed was the nature of hospital library users. In 1984, only 4% of responding libraries indicated that the library was open to all hospital staff; in 1989, this had changed dramatically to 93%. Physicians made up 61% of users in 1984; they had decreased to 59% in 1989. Nurses using the library went from 20% in 1984 to 18% in 1989. Hospital administrators dropped from 5% to 4% over the five-year period.

Programs and services in hospital libraries

A cross-sectional analysis was also performed on information about the programs and services available in Region 7 hospital libraries in 1984 and 1989. Percentages have been computed from respondents only. In 1984, 99% of the libraries reported that they subscribed to Index Medicus, Abridged Index Medicus, or both; in the 1989 survey, 98% reported that they received these indexes. Because these are the two key indexes for health sciences libraries, this result was not surprising.

Interlibrary borrowing and lending activities did not change substantially. In 1984, 92% of the libraries borrowed materials; in 1989, 90% did. In 1984, 74% of the libraries loaned items; 77% made loans in 1989. In 1984, 18% of libraries borrowed but did not lend; in 1989, the figure was 13%.

The percentage of libraries holding only 50 titles or fewer dropped from 46% in 1984 to 37% in 1989; those holding more than 100 titles rose from 44% in 1984 to 51% in 1989. There was thus a slight shift toward increasing the number of available journal titles. On the other hand, audiovisual titles had decreased, with 30% of libraries reporting no audiovisual titles in 1989; only 1% did not have audiovisual

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titles in 1984 (Table 3). In 1984, 87% of the libraries provided manual or computer bibliography compilation services. In 1989, the percentage dropped slightly, to 86%. That is an interesting result; given the growing popularity of end-user searching, a lower percentage might have been expected.

Existence of core services and resources

Specific changes in core services and resources were also examined. PSRMLS identified fourteen core resources and services that should be provided by a well-developed, full-service hospital library in Region 7. These particular features were selected by the PSRMLS staff based on their experience and familiarity with hospital library guidelines and standards [11-14]. Libraries were therefore identified as core libraries if they had the resources and services listed in Table 4.

In the cross-sectional analysis of the results, libraries that didn't respond to one or more of the fourteen core services questions on the survey were excluded. This differs from the analysis provided in the final report for the 1984 evaluation study. In 1984, nonrespondents to questions on core library services were classified as noncore libraries, but their responses were included in all totals presented. The present study used responses from 172 libraries in the 1984 survey and 235 libraries in the 1989 survey.

Table 5
Libraries without core resources and services: cross-sectional analysis*

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<th>1984 (n = 172)</th>
<th>1989 (n = 235)</th>
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<tr>
<td>Without one core service</td>
<td>45%</td>
<td>40%</td>
</tr>
<tr>
<td>Without two core services</td>
<td>28%</td>
<td>23%</td>
</tr>
<tr>
<td>Without more than two core services</td>
<td>27%</td>
<td>37%</td>
</tr>
</tbody>
</table>

* Responses exclude any library that did not respond to one or more core services questions.

While 105 (61%) of the respondents to the 1984 questionnaire were identified as core libraries with all fourteen services available, only 103 (44%) of the libraries were so identified in 1989.

The authors investigated further to determine which factors caused more than half of the current respondents to be in this noncore group (Table 5). More core services were missing in 1989 than in 1984. The core elements most frequently missing in Region 7 hospital libraries in 1984 were marketing and advertising of services (missing from 46% of the noncore libraries) and nursing indexes (missing from 43% of the noncore libraries). In 1989, marketing and advertising were again the most frequently missed services, absent from 60% of the noncore libraries. Audiovisual materials were missing from 45% of the noncore libraries. This absence of advertising was unexpected, because promotion has become important in producing revenue [15].

In a further attempt to explain the many noncore libraries, the data were analyzed for type of personnel. It was thought that libraries with degreed librarians would be more likely to provide core services because of the specific educational background of the staff. If true, this relationship between the presence of trained librarians and the quality of library services offered is important in this era of downsizing of hospitals and cuts in library staff. The analysis showed that the libraries with M.L.S. staff came much closer to having all of the core services than those libraries without M.L.S. staff. In both 1984 and 1989, 83% of core libraries had M.L.S. staff. Only 57% of the noncore libraries had M.L.S. staff in 1984, and only 47% had M.L.S. staff in 1989.

Some core resources and services were available from almost all noncore libraries (Table 6). An established book collection, collection weeding, the presence of either Index Medicus or Abridged Index Medicus, manual or computer bibliographies, and interlibrary borrowing were found in most noncore libraries. The one service often missing from noncore libraries was...
reference service, which was more frequently missing from noncore libraries without M.L.S. staff than from noncore libraries with M.L.S. staff. The 1989 data were identical to 1984 data: 36% of non-M.L.S. libraries lacked reference services, but only 8% with M.L.S. staff did. Given the technological and organizational changes that continue to affect hospital libraries, this list of core services may need to be revised for future PSRMLS surveys. Some hospitals, for example, have moved their audiovisual materials out of the library and into separate media departments. On the other hand, services such as telefacsimile are rapidly becoming available in hospital libraries. Telefacsimile access may soon be seen as a core service for the rapid transmission of interlibrary loan requests.

**New issues and services**

To explore new services provided by Region 7 hospital libraries, the 1989 survey added seven items to the list of services and resources in the 1984 survey. These included training of end users in online searching techniques, microcomputer workstations, GRATEFUL MED searching, CD-ROM searching, consumer health education materials, in-house production of audiovisual materials, and a conservation/preservation program for library materials (Table 7). The authors found it interesting that in spite of the reduction in staff, 22% of hospital libraries provided end-user training; 18% provided microcomputer workstations, searching with GRATEFUL MED, and consumer health education materials; and 16% had some type of preservation/conservation program. It was also surprising that only 9% of hospital libraries used CD-ROM.

The 1989 survey also gathered information on some new issues of interest to hospital libraries. The results are presented here with the hope that a later survey might provide further data and insight. Of the 333 hospital libraries responding to the 1989 survey, 108 (33%) described their institutions as teaching hospitals and 217 (67%) did not. A total of 256 of the libraries (80%) had a separate budget; 64 (20%) did not.

Data were collected on the methods used for interlibrary lending (Table 8). American Library Association forms and telephone requests are still heavily used in libraries; DOCLINE, unavailable during the 1984 survey, was used by 58% of the libraries responding in 1989. Telefacsimile has only recently become more widely available in hospitals; it is still often not located within the library. Nevertheless, 36% of libraries did fax some requests, and this number will certainly rise in the future.

A final question dealt with the provision of services to community health professionals not on the staff of the hospital. Fifty-two percent of the libraries indicated that they provide service to health professionals outside their institutions. With the emphasis on outreach to unaffiliated health care professionals in the National Library of Medicine's (NLM) Long Range Plan [16] and its commitment to such service through NN/LM, this number will probably increase during the next few years.

**CONCLUSION**

The study revealed certain trends for hospital libraries in Region 7 of NN/LM in the past five years. Libraries still retain the printed *Index Medicus* even though online versions are readily available; journal collections seem to be increasing slightly in spite of higher subscription prices; fewer libraries maintain audiovisual collections. Two changes emerged in staffing patterns: a substantial decrease in the number of institutions that use "librarian" as the job title for the person responsible for the hospital library, and an average drop of about one FTE in the staff size. There was an increase in libraries missing the core services expected of a well-developed, full-service hospital library, and core services were more likely to be missing in hospital libraries with no degree librarians. This trend, if it continues, implies some serious consequences for the quality of library services. Finally, more libraries are now open to all hospital staff members; physicians make up a smaller percentage of library users than in the past, but with no real change.
in service to hospital administrators. A complete description of the survey results and analyses appears in the final report of this study, “The Changing Hospital Library, 1984 to 1989: A Study of the Characteristics and Services of Region 7 Libraries and the Need for Consulting and Training Services,” submitted to NLM. Copies are available from PSRMLS.

The kind of longitudinal data gathered for this study is important in tracking libraries, especially during times of economic change. This regional survey, conducted every five years, provides data about the libraries in just one NN/LM region. There is a continuous need, however, for baseline data for all types of libraries in the United States, especially when library managers need to regularly justify their existence to hospital administrators.

REFERENCES

3. Augustave S. Medical libraries, no longer mandated by Medicare, are losing out at budget time. Mod Healthc 1990 Apr 30;20(17):36.

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