Hospital library service and the changes in national standards*

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Two important sets of standards affecting hospital libraries were significantly revised in 1994, those of the Medical Library Association (MLA) and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). As part of its continuing efforts to monitor library services within its region, the University of California, Los Angeles Biomedical Library, Regional Medical Library for the Pacific Southwest Region of the National Network of Libraries of Medicine (NN/LM) conducted a survey in late 1994, in part to determine the effects of these revised standards on regional hospital libraries. Data from the survey were also used to provide a view of hospital libraries in the Pacific Southwest region, and to make comparisons with similar data collected in 1989. Results showed that while libraries remained stable in overall number, size, and staffing, services, especially those associated with end-user searching and interlibrary loan, increased enormously. With respect to the MLA standards, results show a high compliance level. Interesting differences were seen between the perceptions of library staff concerning their rate of compliance with the JCAHO standards and their actual compliance as measured by the

MLA criteria. While some libraries appear to measure up better than their own perceptions would indicate, others may not be fully aware of their actual compliance level.

INTRODUCTION

This article presents analysis from a 1994 survey of hospital libraries in one region of the National Network of Libraries of Medicine (NN/LM) [1]. The study was conducted in part to update and expand basic information obtained in a 1989 survey that was used to gather information about the current status of library services and to identify changes during the intervening five years. The data collected in 1994 were also used to assess how well regional hospital libraries meet two new national standards.

The NN/LM is committed to providing equal access to biomedical information for all health professionals within the United States. To do so, Regional Medical Libraries (RMLs) within NN/LM work under contract to the National Library of Medicine (NLM) to develop and improve health sciences libraries. The University of California, Los Angeles (UCLA), Louise M. Darling Biomedical Library serves as the Pacific Southwest Regional Medical Library (PSRML) for a region that encompasses Arizona, California, Hawaii, Nevada, and the U.S. territories in the Pacific Basin and includes approximately 700 hospitals.

As part of its work to improve regional access to information, PSRML conducts periodic evaluations of hospital libraries in the region. These data provide insight into the changing status of library services and trends in health information delivery patterns, and assist PSRML in developing effective programs to meet the changing needs of the region. The most recent survey was conducted in late 1994, five years after the previous survey of 1989 [2]. A copy of the 1994 survey instrument is included as an appendix.

Since 1989, economic factors have remained an important consideration in the nation's health care system, and hospitals, along with their libraries, have continued to suffer from staff and budget reductions, closures, and mergers. At the same time, rapid advances in technology have brought changes to the way libraries conduct business and to the expectations of those who use their services. In 1994, these changing expectations for library services in hospitals were formalized with the publication of new, fundamentally altered Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards [3].

Reflecting this changing environment, in 1994, the Medical Library Association (MLA) published its own revised standards for hospital libraries, which complemented and further defined the JCAHO standards [4]. The initial 1984 MLA standards were intended to assist both hospital librarians and administrators in defining and enhancing library and information services in health care institutions [5]. The 1994 revisions reflect changes in the handling of information due to proliferation of microcomputers and other technologies, and changing expectations for libraries within hospitals, also articulated by the JCAHO standards.

In the 1994 survey, PSRML gathered information on how the MLA and JCAHO newly developed standards related to hospital libraries in this region. Even though the standards had been in effect for only a very short time, information from this survey establishes baseline data for future comparisons.

After describing the methodology used, this paper will present results of the 1994 survey in four separate parts. The first part includes a general description of the characteristics of hospital libraries in 1994, along with details on the provision of certain essential services as designated by MLA in their revised standards. The second part of the results draws comparisons between hospital libraries in the five-year period between 1989 and 1994, for general characteristics and basic library programs and services. Part three presents a preliminary view of how well regional libraries met the revised MLA standards, and the final part shows how libraries rate themselves in terms of meeting the new JCAHO standards for library services and characteristics.

METHODOLOGY

The 1994 survey instrument was similar to that used in the 1989 evaluation of hospital libraries [6], including many of the exact same questions to make accurate comparisons. Several new questions were added for information relevant to the revised JCAHO and MLA standards. A draft questionnaire was sent to members of the Librarians Subcommittee of the PSRML Regional Advisory Committee and to the Resource Library directors in the region. After revision, the questionnaire was distributed in September 1994 to 691 hospitals within the region. The hospitals were identified from PSRML's regional database, which includes NN/LM members, as well as nonmember libraries and other regional health care institutions included in the 1994 American Hospital Association's Guide to the Health Care Field.

To improve the response rate, a follow-up letter was sent to all non-respondents in February 1995. As a further follow-up, calls were made to hospitals that responded to the 1989 survey but had not responded by

March 1995 to the current survey. As a result, a total of 355 institutions returned the survey, a response rate of 51%. Of the 333 hospital libraries that responded to the 1989 survey, responses were obtained from 233 (70%).

After computer data entry, data cleaning checks were performed. For questions with categorical responses, data values outside those valid categories were isolated for checking against the answers on the original survey forms. Errors were corrected, but if the real answer given was invalid then a missing value was substituted into the analysis database. For questions that had quantitative, continuous responses, values were identified that seemed unusual (i.e., either extremely high or low) based on the authors' knowledge and experience of hospital library characteristics. The unusual responses were then reviewed for errors, and as a result, a small number of corrections were incorporated into the analysis database. Questions with subparts, which asked for percentage breakdowns of users, were forced to sum to 100%, except for those responses in which every subpart of the question was left blank. For example, if only two subparts were answered as 20% and 30%, the relative proportions of those answers were kept but they were scaled up to 40% and 60% respectively, so that they sum to 100%. Questions which asked the respondents to indicate which resources were available in the library from a list of possible resources were recorded as missing values if the respondents did not identify any items from the list.

Univariate summary statistics were computed. Cross-tabulations were used to compare responses for two or more subgroups among the 1994 libraries, and continuity-corrected chi-squared tests were used to assess the statistical significance of the differences in the percentages observed. Comparisons to the 1989 survey responses were made by a matched comparison of those libraries which responded both in 1989 and in 1994. For continuous measures, paired t tests were used to compare the matched-sample means in the two years and to obtain P values to assess the statistical significance of the test of equal means. All tests of statistical significance were at the 5% level.

RESULTS

Responses from all 355 institutions returning the most recent questionnaire were used to describe the characteristics and services of hospital libraries in 1994 and to describe the current rate of compliance with the newly revised MLA standards. In describing the relationship between libraries and the new JCAHO standards, responses used were from the subset of 320 hospitals that identified themselves as JCAHO-accredited institutions. Finally, to present comparative figures for 1994 and 1989, responses from a group of 233

hospitals that responded to both surveys were compiled.

Regional hospitals and their libraries in 1994, an overview. This paper looks first at general characteristics of the region's libraries and the hospitals that support these libraries. Of the 355 respondents, the majority were relatively small, with 51% having fewer than 200 beds. Only 37% identified themselves as teaching hospitals. Seventy-one percent had a hospital-wide information system, but of these, only 25% had library services listed as an option on the system. Seventy-four percent of the respondents stated that they had a separate library collection that was staffed, while 23% had a collection with no staff, and only 3% had no centralized library collection. Libraries were designated as a separate department in 69% of the responding hospitals, and 81% of all libraries had a separate budget. Collections were relatively small: the average monograph collection size was 1,909 titles, with 43% of the total respondents having 500 or fewer titles; the average journal collection was 140 titles, with 52% of the libraries having 100 or fewer titles; and audiovisual (AV) collections averaged 221 titles per library, with 26% of the respondents having no AV titles and a further 38% owning 100 or fewer. While most monograph collections (87%) were cataloged according to some type of classification scheme, only one-third of the AV collections were cataloged and most journal collections were organized alphabetically (91%). A little more than three-quarters (77%) of the responding libraries had a written collection policy, whereas approximately one-quarter (26%) had an online catalog of their holdings. Eighty-three percent made some type of journal listing available for users.

In terms of responsibility for the library, 75% were managed by a librarian: either on site (59%); from the library of the parent organization, if the hospital was part of a group or corporation (3%); or by a hired consultant (13%). The remaining libraries were the responsibility of a secretary or a staff member from another department, such as health information management (formally medical records). The average staff size was 1.2 FTE. While almost all the responding libraries were open to everyone on their institutional staff (94%), a little more than half (53%) provided services to community health professionals who were not affiliated with the hospital. A majority of the libraries (79%) had regularly scheduled hours of service, and most of those responding (91%) provided access after regular hours.

Turning to specific library services, 82% provided traditional reference service, while 84% provided on-site computerized literature searches. Interlibrary loan (ILL) services were provided by most libraries with 92% borrowing items for their patrons and 76% willing to lend materials to other institutions. Of those

Figure 1
MLA essential services, 1994

Access to collection and regular service hours
Microcomputer workstations for staff/users
Access to knowledge-based databases
End-user training in database searching
Reference/information services
ILL/document delivery using electronic networks
Online access to other library collections
Access to Internet
Up-to-date book, journal, software collections
Current awareness services
Access to patient education resources
Photocopy facilities
Access to poison control information
Access to hospital formulary
Participation in cooperative networks
User orientation/education
Telefacsimile capabilities
Access to AVs
Participation in hospital committees

providing ILL services, 74% utilized DOCLINE, and 75% used American Library Association (ALA) forms. While 62% of respondents had telefacsimile (fax) capabilities, only 40% had access to the Internet. Of those with Internet access, 84% had e-mail, and 43% had access to the World Wide Web.

Essential services. In a final analysis of the 1994 data, this section looks at a somewhat different grouping of library services to see how many of these are provided by regional hospitals. The nineteen services investigated here have been designated in the 1994 revision of the MLA standards as "essential to all library and information services" to support the "patient care, education and research needs of the institution." Figure 1 lists these services.

For this analysis, results are from the 1994 data for the 299 institutions that responded to questions about all nineteen services. Surveys missing a response to any of the nineteen services were not included.

Many of the nineteen essential services are very specific (e.g., access to poison control information), and therefore easily determined from the survey data. Other service criteria are more open to interpretation, and can be met by several of the data elements included in the survey (e.g., "current awareness service" can be provided through routing new journals, table of contents service, or a formal SDI program). One essential service, "access to electronic regional and national networks, such as the Internet" was difficult to precisely define. At the time the MLA standards were being developed, the Internet was emerging, so that the idea of being able to electronically share all types of information other than just that concerning library collections, was regarded as important. Some libraries had access to an e-mail system, such as BITNET, and began

to share information electronically at a local or regional level. By late 1994, however, when the PSRML survey was issued, the Internet had become the major vehicle for this type of sharing. Therefore, PSRML decided that libraries met the service criterion of access to electronic networks if they had access to the Internet.

In 1994, only twelve (4%) of all responding libraries provided all nineteen essential services. Access to online databases was the service most frequently available (in 99% of responding libraries) with participation in cooperative networks being the second most frequent (available in 92% of libraries) and an up-to-date collection third (available in 91% of libraries). Analyses of the number and identity of essential services missing from the remaining 96% of responding libraries show that only one essential service was missing in 8% of those libraries, but for 77% of the libraries there were at least three essential services missing. The following list shows the services most frequently unavailable in libraries that lacked at least one essential service and includes the percentage of libraries in which each was missing:

- microcomputer workstations (61%)
- poison control information (56%)
- patient education resources (55%)
- Internet access (55%)
- hospital formulary (53%)

Comparison of hospital library characteristics and services over time—1989 and 1994. Changes in key library characteristics and services in the region over a five-year period are analyzed by longitudinally comparing 1994 survey data with the survey responses in 1989 for the 233 institutions that responded to both surveys. Because the same libraries are compared over time, the observed changes are more easily attributed to the five-year period itself rather than to any variability in the libraries that made up the study sample in the two periods.

General characteristics of the hospital library

The first area investigated was how hospital library staffing, users, collection size, and centralization changed over five years. In 1989, the survey identified 228 institutions as having a central collection, and this number was virtually the same, 229, in 1994. In 1989, 201 of these libraries with a central collection also had either full- or part-time staff; by 1994 this number had decreased by 5% to 189.

Libraries with staff showed little change in the number of personnel over the five-year period, with 69% having less than 1.5 FTE in both years. In 1994, 24% of libraries had 1.6 to 3.5 staff FTE, compared to 22% in 1989. The average number of salaried FTE on a library staff rose from 1.36 in 1989 ($N = 230$) to 1.41 in 1994 ($N = 217$). Among libraries which had some type

Table 1
Libraries providing computer-based services

	1989 (%)	1994 (%)	Missing
Training in online searching	25	54	11
Microcomputer workstations in the library	20	44	11
CD-ROM stations in the library	10	54	12
Grateful Med software available in the library	20	41	12
Access to DOCLINE for ILL	67	84	50

of staffing, those managed by a librarian rather than by a secretary or staff member from another department rose from 92% in 1989 to 95% in 1994. The average number of degreed librarians per library rose slightly from 0.79 in 1989 (N = 224) to 0.88 in 1994 (N = 220).

Average book, journal, and audiovisual collection size was unchanged in the five-year period. Finally, library users did change slightly since the prior survey; whereas in 1989, 95% of these libraries were open to all staff, this number increased slightly to 97% in 1994. The types of users in 1994 include 54% physicians (down from 58% in 1989), 19% nurses (similar to 1989), 8% other health professionals (as in 1989), and 6% health sciences students (up from 1% in 1989).

Programs and services in hospital libraries

A second area of comparison was among various services and programs provided by the hospital library, looking first at the more traditional services offered. The fraction of libraries subscribing to *Index Medicus* or *Abridged Index Medicus* dropped from 99% in 1989 to 83% in 1994. However, the fraction of libraries providing ILL services saw almost no change, with borrowing decreasing from 95% to 94%, and lending increasing from 84% to 85% in 1994. However, the volume of ILL activity increased substantially, with the average number of items borrowed rising from 930 (Standard Deviation = 1225.85) in 1989 to 1,162 (SD = 1579.28) in 1994, and of items loaned increasing from 599 (SD = 1032.89) to 810 (SD = 1502.58) in that same period.

Among the computer-dependent services provided by a library, which are particularly important given the changing library environment reflected in the new JCAHO standards, there were similar increases since 1989. The changes in the percentage of libraries providing these services are shown in Table 1.

For the less traditional services provided by hospital libraries, comparisons were made for patient education materials, service to community health professionals not affiliated with the hospital, and the marketing or promotion of library services. These two latter services saw little change over the five years, with marketing increasing by 4% (64% in 1989 to 68% in 1994) and no

change for services to community health professionals. However, the availability of patient education materials increased more dramatically, rising from 22% to 51% in 1994.

Compliance with revised MLA standards. Apart from investigating the availability of these designated essential services, PSRML was also interested in determining from the latest survey data how closely regional libraries met, in general, the standards developed by the association. The 1994 revisions to these standards reflected the changing expectations for hospitals in the JCAHO's new standards for health care institutions. The 1994 MLA standards are divided into ten different but somewhat overlapping categories: Purpose, Staffing, Management, Needs Assessment, Collection, Organization, Services, Linkages, Quality Improvement, and Facilities.

PSRML selected thirty-six unique criteria from these ten MLA categories, against which hospital libraries could be measured. Because the new MLA standards made significant changes from previous standards, PSRML had no expectations concerning the number of regional hospital libraries which might meet all thirty-six criteria. Rather, the study was designed to determine which services and characteristics were most likely to be missing in these libraries.

Results showed that while only one of the 355 responding libraries met all of the identified criteria, 47% of libraries met twenty-seven to thirty-five of the criteria and another 29% of libraries met eighteen to twenty-six of them. In determining whether or not libraries met the criteria, data were handled in two ways. For criteria satisfied by a positive response to a single question (e.g., "Does the library have a written collection policy?"), any library for which the answer was missing was counted as not meeting that particular criterion. For criteria satisfied by a positive response to one of two or more questions (e.g., "Does the library disseminate journal information?"), if one of the answers was positive the library was counted as meeting that standard, even if there were missing or negative responses for the other questions.

Data were analyzed to determine those services and activities most likely to be missing, and those most frequently present in regional libraries. The next two tables shows these results: Table 2 shows the ten service criteria most frequently missing from the 1994 hospital library respondents; Table 3 includes seven services most frequently available, provided by 85% or more of the respondents. The first of these seven, access to a literature collection, was met if they had any type of library (whether staffed or not staffed). The sixth, library has linkages within the institution, was met if the library staff was either involved in developing the HIS, participated in hospital committees or institution-wide QI activities, used as a resource for

Table 2
Service criteria most frequently missing from libraries, 1994*

	N = 355 (%)
Library involvement in developing HIS	(86)
Microcomputer workstations	(63)
Internet access	(60)
Poison control information	(57)
Access to patient education materials	(56)
End-user training in online searching	(51)
Hospital formulary	(54)
Library managed by a professional librarian	(44)
Electronic access for ILL and document delivery	(44)
Participation in institution-wide QI	(43)

* Percentages of libraries lacking the service appear in parentheses.

hospital-wide QI activities, or, provided either clinical librarian or LATCH service for the hospital.

Self-rating of compliance with the 1994 JCAHO standards. A final area of interest to PSRML was the new JCAHO standards for hospital information services. Since the new standards were first implemented in 1994, the data presented here are clearly from a very early stage in the implementation. They provide baseline data for future comparisons.

The results in this section were from the 320 hospitals who described themselves as being accredited by JCAHO, 93% of the total respondents. Among these accredited institutions, 76% stated that JCAHO evaluators visited the library during the last accreditation visit to their institutions. Respondents were asked to rate their library's level of compliance on a self-rating scale of 1 to 5 in which 1 represented complete compliance with the JCAHO standards and 5 meant the library was not in compliance. The results are shown in Table 4.

Because of the close relationship between the JCAHO standards and those developed by MLA, PSRML compared the level of compliance with the thirty-six criteria identified from the MLA standards to the perceived JCAHO compliance. Table 5 shows this comparison, with MLA standards grouped to correspond with the five JCAHO compliance ratings.

Table 3
Service criteria most frequently available from libraries, 1994*

	N = 355 (%)
Access to a collection	(96)
Access for all staff	(94)
Access to computerized databases	(92)
Access after regular library hours	(91)
Classified collection	(87)
Linkages within the institution	(86)
Up-to-date collection	(85)

* Percentages of libraries meeting each criteria appear in parentheses.

Table 4
Self-rating of libraries' compliance with new JCAHO standards

Self-rating scale	Responding libraries N = 355 (%)		Implementing standards N = 228 (%)	
1 (Completely met)	49	(16)	45	(17)
2	116	(37)	111	(42)
3	103	(33)	88	(33)
4	29	(9)	18	(7)
5 (Did not meet)	17	(6)	3	(1)
	Missing = 41		Missing = 23	

DISCUSSION

This report presents a general picture of hospital libraries within the Pacific Southwest Region of the NN/LM at the end of 1994. Apart from determining the current status of regional libraries, the report looks at the provision of a certain group of services of particular interest to PSRML. The report also assesses personnel, administrative, and services changes in hospital libraries since the 1989 survey. An additional area of focus is how well regional libraries meet national standards for the provision of knowledge-based information within the hospital.

Regional hospital libraries in 1994

Many hospital libraries in the Pacific Southwest Region are located in small, non-teaching institutions and are small, one-person operations, with regular hours of service and staff access after hours. Library staff are extremely service-oriented, providing access not only to all categories of staff at the parent institution, but frequently also to community health professionals not affiliated with the institution, and to patients and their families. Although library collections are limited and AV materials are decreasing in importance, essential current journals are usually available on-site. Books are cataloged and kept up-to-date through weeding. Because of their small size, collections are heavily supplemented through ILL services with libraries primarily using DOCLINE to

Table 5
Comparison of hospital libraries' self-rating for compliance with JCAHO standards and their actual compliance with MLA criteria*

MLA criteria	JCAHO compliance rating				
	1	2	3	4	5
Met all 36	1	0	0	0	0
Met 27–35	32	69	38	9	1
Met 18–26	12	31	35	10	2
Met 9–17	3	12	18	6	5
Met 0–8	0	2	5	2	2

N = 295.
* JCAHO compliance scale based on 1 = complete compliance; 5 = library not in compliance.

gain access to other library collections. Microcomputers are extremely important to libraries for a variety of reasons: they are used by library staff to provide literature searches for hospital personnel and to engage in ILL activities. Library staff also use the computer to train health care professionals to conduct their own bibliographic searching. The end user also makes heavy use of microcomputers, either accessing the library's own CD-ROM products or external databases through front-end software such as Grateful Med. In spite of the ready availability of computer technology, information on the library's own collection is not typically available online; neither do library staff generally have access to other resources and library collections through the Internet. While hospitals generally have some type of networked information system (HIS), library staff have not usually been involved in the development of the system; nor are libraries and their services or collections accessible through the system.

Changes in regional hospital libraries in the last five years

In the five years between 1989 and 1994, hospital libraries in the Pacific Southwest Region have remained surprisingly stable in spite of the continuing shifts in management and funding of health care organizations. Only a small overall decrease in the number of libraries was noted, while those libraries managed by a professional librarian actually increased slightly. Staffing also saw very little change during this period, showing a modest increase in the total average FTE and a slight increase specifically in libraries managed by a professional. In looking at who was served by the libraries during those five years, while the percentage of libraries that serve all types of users increased slightly, there were some shifts in the categories of users. Physicians made up a smaller percentage of library users, while nurses, administrators, patients and students all increased slightly. These results can be perceived as encouraging, since the 1989 survey identified decreases in both the overall numbers of libraries and the size of their staff. The continuing expansion of service to all types of health care professionals, as well as to patients and their families, is also encouraging, especially given the revised JCAHO standards which foster this expansion of information access to all hospital personnel.

This stability among established hospital libraries and their staffs is in strong contrast with the dramatic changes which have occurred regarding the services provided by these libraries. Although there is little change in the number of libraries engaging in ILL activities during this period, the volume of those activities has increased enormously in five years. This trend is not surprising perhaps, because of the continuing growth in the biomedical literature. Borrowing and lending have become more critical for libraries as the

number and variety of journals continually expand, while funding for the purchase of journals becomes more limited. Reflecting this growing need for resource sharing, the use of DOCLINE has also increased substantially among hospital libraries, a clear acknowledgment of the efficiency and utility of this automated ILL system developed by NLM. Apart from its impact on ILL operations, this ever-growing literature base also makes the role of computers more important as hospital libraries seek better ways of organizing and providing quick access to information. While most libraries have continued to offer computerized literature searching as a basic service, with little change seen over the five-year period, the phenomenon of end-user searching has clearly grown in importance. All the services associated with this phenomenon have experienced an explosive growth since 1989: the provision of training in database searching; access to databases for end users through either CD-ROM products or Grateful Med; and the provision of microcomputers for patron use have all more than doubled. The most dramatic escalation was in CD-ROM access, which increased more than 500% in five years.

While hospital libraries have experienced significant growth in the level of activities and services they provide for primary users, many of them still provide service to other groups. The increase in the availability of consumer health materials and the percentage of patients and their families using the library point to a growing recognition of the need for service to this group. Unfortunately there is no corresponding growth in service to unaffiliated health care personnel. While service to individual health professionals in the community remained unchanged over the five-year period, only a little more than one quarter (28%) of the responding libraries reported any type of formal outreach service to unaffiliated institutions, a small increase from 1989 (24%).

While the increase in service to primary users is laudable, there is concern that the concept of outreach does not appear to have become incorporated as a hospital library service in the five-year period under investigation as was anticipated. Given the increased accessibility of resources and services made possible by programs such as Grateful Med and Loansome Doc, this type of service has become easier to provide. While a few libraries have promoted this type of service to outside health care providers, and some even see it as a valuable way of producing revenue, for many libraries the concept of service to other than primary users is not a priority or, in some cases, just not possible. It is difficult to speculate on the reasons for this since no specific data were collected on outreach services. Many factors may be involved, including the obvious: the increased workloads of the libraries in this study. Whatever the reason, it is left to the large, academic health science centers, which are likewise

feeling the pressure of increased workloads and re-duced budgets, to serve the needs of the unaffiliated.

The nineteen services that MLA describes in its 1994 standards as "essential" in fulfilling the information needs of hospital staff, reflect the new computerized information climate and the importance of links between the hospital library and the growing body of resources available outside the institution's walls. Given that both the standards and the concept of how information is disseminated within the hospital setting are new, it is not surprising that few regional libraries provided all nineteen of these services. What is encouraging is the list of services that almost all responding libraries do provide: more than 90% have access to online databases, have an up-to-date collection, and participate in some type of cooperative network, while more than 80% also provide the more traditional, yet equally important reference and photocopy services, as well as some type of current awareness service for their users. However, many libraries still lack computer workstations and therefore access within the library to the Internet and other online resources which are serious drawbacks. Other missing services, such as a hospital formulary and poison control information in the library are more easily instituted since their procurement is neither dependent on large expenditures nor the involvement of other hospital departments. Overall, the data on these essential services provide an encouraging picture; given that 23% of the libraries lacked two or fewer of these services, it can be expected that many more libraries will meet all the criteria in the near future.

Regional hospital libraries and national standards

In examining the data for all thirty-six criteria of the new MLA standards as identified by PSRML, regional results show a similarly high compliance level. Although only one library met all thirty-six criteria, 77% of the libraries met 50% or more of the criteria. While the lack of microcomputers and access to the Internet are significant, decreasing microcomputer prices and the proliferation of Internet providers may assist libraries in overcoming these deficiencies without major funding initiatives in the next few years.

It is interesting to note the difference in perception amongst library staff concerning their rate of compliance with the JCAHO standards and their actual compliance as measured by the thirty-six MLA criteria. While some libraries appear to measure up better than their own perceptions, others may not be fully aware of their actual compliance level. This calls for more promotion of the standards and assistance in meeting them, a role which MLA and its local chapters, in conjunction with the RMLs, might find very valuable in improving health professionals' access to information services.

CONCLUSION

The 1994 PSRML survey was conducted to meet four major goals: to update and expand basic information on regional hospital libraries obtained in the 1989 survey in order to understand the current status of library services in the region; to identify changes in services during the past five years by comparing data with the previous survey; to assess how well regional hospital libraries meet the newly revised standards published by MLA; and to compare the level of compliance with MLA standards against the perceived compliance with newly revised JCAHO standards.

Information from the survey has provided a clear picture of hospital libraries in the Pacific Southwest Region in 1994. What emerges is a relatively stable situation in terms of the number of libraries and their staff, but a dramatic change in the types of services provided. The computer is now a key factor in providing information access. The phenomenon of end-user searching, the tremendous popularity of CD-ROM products, and the increasing need for access to other library collections for ILL services all attest to the central role of the computer in hospital libraries.

In looking at the standards that MLA developed to assist the hospital library in meeting its service goals, many libraries in the PSRML region are well on their way to compliance. It can be reasonably expected that by the time of the next survey a much greater percentage of libraries will have met them. Meanwhile, the present PSRML study has established useful baseline data for hospital libraries in the region, at the start of the implementation of both MLA and JCAHO revised standards.

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APPENDIX A

Pacific Southwest Regional Medical Library (PSRML) 1994 evaluation survey

I. LIBRARY DEVELOPMENT

Institutional characteristics:

1. Total number of beds:
2. Total number of outpatient visits:
3. Is institution a teaching hospital?   No ____ Yes ____
4. Total number of active medical staff (M.D.s and D.O.s)
5. Total number of hospital employees (all employees, EXCLUDING medical staff):
6. a. Is there an overall hospital information system in your institution?   No ____ Yes ____
   b. Is the library listed as an option on the system?   No ____ Yes ____
   c. Was the library involved in developing the system?   No ____ Yes ____

Library characteristics:

7. Which statement below best describes the library?
   ____ library with a collection and full or part time staff
   ____ library with a collection but not staffed
   ____ no central collection; journal subscriptions and book purchases are handled by individual departments
8. a. Is the library open to all staff at the institution?   No ____ Yes ____
   b. If no, what are the restrictions?
9. Who is responsible for the medical library?
   ____ librarian (on site)
   ____ librarian from "parent" institution
   ____ visiting consultant under contract
   ____ secretary
   ____ medical staff member
   ____ medical records personnel
   ____ other, please specify:
10. How many salaried FTE (full-time equivalent) are there on the library staff?
11. Indicate by number of individuals the highest education level of library staff.

	Number of individuals
1–12 years of schooling	_____
A.A. degree	_____
B.A. degree	_____
M.L.S. degree	_____
other, specify:	_____

12. Do any library staff participate in any continuing education activities?   No ____ Yes ____
13. Do any library staff belong to library organizations or associations?   No ____ Yes ____
14. Do any library staff participate in hospital committees (excluding the library committee)?   No ____ Yes ____
15. Does the library have a quality improvement plan to measure and monitor performance
    and improve services?   No ____ Yes ____
16. Do any library staff participate in institution-wide quality improvement activities?   No ____ Yes ____
17. Is the library used as a resource for hospital-wide quality improvement activities?   No ____ Yes ____
18. Does the library have an advisory group/library committee?   No ____ Yes ____

Library collection:

19. Does the library have a written collection policy?   No ____ Yes ____
20. Total number of books in the collection?
21. Approximately what percentage of these books were published within the past 5 years?   ____ %
22. Is the book collection cataloged according to a standard classification scheme?   No ____ Yes ____
23. Total number of journal titles currently received?
24. How are the journals arranged?
    ____ alphabetically
    ____ classification order
    ____ other, specify:
25. Is there a list of journals which the library receives made available for users?   No ____ Yes ____
26. Total number of audiovisual titles in the collection?
27. Is the audiovisual collection cataloged according to a standard classification scheme?   No ____ Yes ____
28. Does the library provide access to the following resources: (Check all that apply.)

	Print	Online	CD-ROM
Index Medicus (IM)	___	___	___
Abridged Index Medicus (AIM)	___	___	___
Cumulative Index to Nursing and Allied Health Literature (CINAHL)	___	___	___
International Nursing Index (INI)	___	___	___
Hospital Literature Index (HLI)	___	___	___
Medical Books and Serials in Print	___	___	___
medical and standard dictionaries	___	___	___
directories	___	___	___
practice guidelines	___	___	___
poison control information	___	___	___
hospital formulary	___	___	___
locator tools such as union lists	___	___	___
consumer health information materials	___	___	___

29. Does the library have an online catalog of its holdings? No ___ Yes ___
30. Are older materials discarded (weeded) from the library's collection? No ___ Yes ___

Library services:

31. Does the library have regularly scheduled hours? No ___ Yes ___
32. Is there library access after regular library hours? No ___ Yes ___
33. Which of the following services does the library provide for its users? (Check all that apply.)
___ manual compilation of bibliographies
___ computer literature searches—on-site
___ computer literature searches—from other libraries
___ Grateful Med available for users
___ CD-ROM available for users
___ photocopies of journal table of contents
___ routing of journals
___ photocopying for users
___ translations
___ interlibrary loans (ILLs) borrowed from other libraries
___ interlibrary loans (ILLs) loaned to other libraries
___ reference
___ SDI (Selective Dissemination of Information)
___ clinical librarianship
___ LATCH (Literature Attached to Charts)
___ promotion (advertising/marketing) of library services via newsletters, acquisitions lists, brochures, etc.
___ user orientation and education
___ end-user training in database searching
___ microcomputer workstations for users
___ audiovisual production
___ preservation/conservation of library materials
___ access to the hospital-wide information system (HIS) from within the library
___ telefacsimile capabilities
___ other, please specify:
34. Does the library have a plan for regularly assessing the information needs of its users? No ___ Yes ___
35. a. Does the library have access to the Internet? No ___ Yes ___
   b. If yes, that Internet features are available:
   ___ electronic mail   ___ listservs
   ___ File Transfer Protocol (FTP)   ___ World Wide Web
   ___ Telnet   ___ Gopher
36. How many items (photocopies and originals) did the library request via interlibrary loan last year?
37. How many items (photocopies and originals) did the library lend via interlibrary loan last year?
38. Which of the following methods does the library use for sending/receiving interlibrary loan requests? (Check all that apply.)
___ ALA/ILL forms
___ electronic mail systems, e.g., CLASS
___ DOCLINE
___ telephone
___ telefacsimile
___ OCLC
___ Ariel

_____ courier/messenger service
_____ other, specify:
39. In which of the following activities does the library participate? (Check all that apply.)
_____ library consortia or networks
_____ outreach or extension services to unaffiliated institutions
40. Is the library a member of the National Network of Libraries of Medicine?   No _____ Yes _____

Library users:

41. Approximately what percentage of the library users are: (Total must equal 100%.)

doctors	_____ %
nurses	_____ %
administrators	_____ %
researchers	_____ %
other health-related professions	_____ %
health professional students	_____ %
patients/patient family members	_____ %
non-health related professions	_____ %
general public	_____ %
	100 %

42. Does the library provide services to community health professionals who are not members of the hospital/academic health center staff?   No _____ Yes _____

II. MANAGEMENT OF INFORMATION IN HOSPITALS

Many changes have occurred in the health information area over the last few years. One of the most important for hospital libraries has been the Joint Commission on Accreditation of Healthcare Organizations' (JCAHO) integration of information functions in their 1994 accreditation standards. Please answer the followings questions so that PSRML can assess how hospital libraries have been affected by the new standards.

43. a. Is your hospital accredited by the JCAHO?   No _____ Yes _____
    b. If yes, when was the hospital last accredited?   19 _____
    c. Was the library visited by the accrediation team during the last visit?   No _____ Yes _____
    d. When is the hospital's next scheduled visit from JCAHO?   19 _____
44. Are you aware of the 1994 JCAHO standards for the management of information in hospitals?   No _____ Yes _____
45. a. Has your institution begun to implement these standards for management information?   No _____ Yes _____
    b. If yes, when did the implementation begin?   19 _____
46. On a scale of 1–5, how would you rate your institution's current compliance with these standards as they pertain to knowledge based information?

Completely		Somewhat		Not in compliance
1	2	3	4	5

47. Although changes may occur for other reasons, can you determine what effect the implementation of these standards had on the following?

	Increased	Stayed same	Decreased
number of library staff	_____	_____	_____
library budget	_____	_____	_____
on-site collection of library materials	_____	_____	_____
collaborative involvement with other information management departments (e.g., systems, medical records)	_____	_____	_____
involvement of library staff in hospital committees, teams, etc.	_____	_____	_____
library's responsibility for satellite libraries/collections on nursing units or in other hospital departments	_____	_____	_____

48. What effect has the implementation of these standards had on the following:

	Increased	Stayed same	Decreased
access to the library's own collection	_____	_____	_____
access to online resources	_____	_____	_____
access to other libraries' collections	_____	_____	_____

49. Comments: (Please use verso of this page for additional comments)
50. Is the library a separate department?   No _____ Yes _____
51. Does the library have a separate budget?   No _____ Yes _____