



# Improvements in Recordkeeping and Use

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TWO THEMES are woven through this paper: the first is an account of pertinent policies and practices in medical libraries; the second draws attention to policies and practices which, although reported from nonmedical libraries, might well have some practical value for medical libraries. In most cases these themes will be illustrated by examples.

Uses and users can be counted and compared; records have a certain comfortable stability because they are composed primarily of numbers. Unfortunately most users of libraries are people, most library services are given directly or indirectly by people, and it is people—librarians—who decide what records to keep, what arrangement is used for their keeping, and how to interpret them.

Ultimately the quality of the records kept and the services offered depends on the quality of the librarian responsible for each. Stephenson described the primary characteristic needed by the librarian who could best develop these two elements in his address at the SLA convention in 1964.<sup>1</sup> Shaw, in a thought-provoking paper in *Science*, pointed out the direction, "The only purpose of information service . . . is to satisfy the user's need for information under the conditions under which he is working."<sup>2</sup>

## RECORDKEEPING

### SELECTION AND WEEDING

Medical education has been going through one of its periodic self-examinations and convulsive periods of innovation during the past decade. These rumblings and changes (whether progressive or

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retrogressive) have affected medical libraries. The addition of new subjects to the curriculum (a neat trick in itself since most curricula were overloaded at the start of this period) has meant added pressure on the libraries to supply additional material to meet the new needs. Some libraries have attempted to satisfy the new demands through increased interlibrary loan activity or by drawing heavily on their affiliated university libraries or on other specialized libraries on the campus. Other, possibly more service-minded or far-sighted, medical libraries have attempted to add books, journals, and other materials in these subjects to their own collections.

Recordkeeping enters into this area in a number of ways. An author can survey an emerging field to show how it has developed and make some positive statements on how a library can meet the new needs. Chen has made a statistical survey of trends in biophysical research by examining the papers and funding involved in four annual meetings of the Biophysical Society.<sup>3</sup> While few librarians during the past decade have thought of biophysics as a "new" field, Chen's approach and methods are of interest not only for this field but for others as well.

An excellent example of the definition of a field and the identification of necessary books and journals was accomplished for the behavioral sciences by MacKenzie and Bloomquist, who recalled earlier prophets of the need to incorporate the behavioral sciences into medical libraries and then pointed out that a decade of little activity followed this initial recognition.<sup>4</sup> In other words, medical school curricula and library selection policies are made up by ordinary human beings. MacKenzie and Bloomquist described ways in which libraries organized under different administrative set-ups might approach this need. The major portion of their paper deals with the building up of a master file, the assignment of priorities, the usefulness of records derived from such practical publications as the late and lamented *Mental Health Book Review Index*, and from appropriate faculty members.

New subjects for a medical library to consider may appear also in the form of a new slant to an "old" subject. Veterinary medicine is one such subject, and Bishop has shown the relationships between it and human medicine, and its importance for medical libraries that did not have to consider it earlier. Bishop showed how veterinary medicine has become a necessary part of many collections on human medicine, and further pointed out how the addition of veterinary items to *Index Medicus* and MEDLARS, through the pressure of the

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written record and the computer-accessible record, forces this field into medical libraries. Bishop underlined the vital orientation for the medical librarian when he concluded that "We can hardly claim a service philosophy for medical librarianship if only lip service is paid to one large area of biomedical knowledge."<sup>5</sup>

If libraries are to move ahead in a planned and productive manner they must know where they are and where they have been. Henderson has written a first-rate review of nursing libraries showing both the past and present.<sup>6</sup> A good review article serves as a vital record of the current state and the steps taken to reach that state.

Nursing libraries also provide good illustrations of how the scope and level of collections must be adjusted to trends in education. Smith reviewed the development of nursing education and showed how the school library must change its policy of collecting and providing information to meet these developing needs.<sup>7</sup>

Selection of materials involves a variety of records, and the librarian responsible for selection in a medical library will want to organize suitable files to keep the necessary information readily available for consultation, as well as in a form that will make easy the construction of required internal and external reports. Multiple-copy order forms and the photocopier are useful aids in these endeavors.

Records of needs (whether written or spoken) will sometimes trigger a practical response when circumstances have reached the fiscal or administrative point of ignition. Jacobus, *et al.*, described the response made by BioSciences Information Service to a need from the Walter Reed Army Institute for Research.<sup>8</sup> The studies and evaluations required to develop this service to its full potential are examples of modern recordkeeping.

The Information Exchange Groups, sponsored by the National Institutes of Health, attempted to present a new approach for the transfer of information.<sup>9</sup>

#### SELECTION—CHANGES IN TYPES OF MATERIALS

Medical libraries are now selecting, acquiring, and processing not only the traditional books and journals but also reports, preprints, microforms, audiovisual materials, computer tapes, and other forms of information. Any item that may be a source of information to a user must be considered as a candidate for the collection. Here

again, if the librarian is aware of curriculum-planning and teaching methods at his institution he will have a decided advantage in being able to obtain support for adding such materials to his collection. Catalogs often, but not necessarily, the results of a computerized program (e.g., *Current Catalog*) will furnish helpful selection and acquisition records.

The transition from book to nonbook is not a simple one. Many varieties of material fall in the gray area between easily recognized examples of these two classes. Keeping up with meeting reports is one variety of recordkeeping that has several pitfalls. Cruzat surveyed the situation thoroughly in 1967.<sup>10</sup> Since her report, new entries in the field include the *Medi-kwoc Index* and *Current Programs*. The former is an experimental effort produced by the Washington University School of Medicine Library, and its subtitle, "An Index to the Published Proceedings of Conferences and Symposia on Biomedicine," clarifies its purpose. The latter is the product of a commercial concern, World Meetings Information Center, Inc., and attempts to index the programs themselves rather than the published proceedings. Each of these efforts to control materials previously outside the traditional book and journal will stand or fall on the basis of support from subscriptions; the results will be an interesting commentary on priorities in library budgets and users' expressed needs.

The medical library deals with information in a number of formats for a variety of users, but primarily for users as individuals—not as groups. One of the most creative and active programs in multimedia is the Medical Communications Center in the Medical Library of the University of Wisconsin. Meyer has described the initiation of the center and its programs: dial-access library, single-concept films and telephone radio conferences.<sup>11</sup> The use of these materials and the feedback from their users are recorded in detail to provide a solid base for improvement and expansion. Informed and understandable recordkeeping is necessary not only for selection, acquisition, classification, and circulation, but also for continuing growth and development.

Olch has drawn attention to developments and needs in the area of oral history.<sup>12</sup> The combination of taped interviews and manuscript materials is one that can lead to the creation of valuable collections of primary material; Wasserman has outlined a method for controlling these materials.<sup>13</sup>

The gathering and accessibility of nonbook materials is only one

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part of the historical record. Lewis<sup>14</sup> has spoken out clearly on the two-fold requirement to improve the situation: more must be learned about users' attitudes and needs, and producers must be urged to improve their products. Medical librarians have important roles to play in both areas, but little has appeared from them in the literature. Active investigation, promotion, and advice leading to improvements are vital steps to be taken.

#### METHODS

Various approaches are open to the individual responsible for selection in a medical library. The traditional methods have been summarized by Beatty.<sup>15</sup> For journals, however, there are also several methods based on recorded use, preference, and citation. While some of these have been known and used for a long time, others are relatively new, and several are only in the experimental stage.

Whittle used subject lists from *Index Medicus* to survey the faculty at her medical school.<sup>16</sup> In addition to giving priorities on these lists, the faculty members were asked to add nonindexed journals they felt were of substantial importance. This was a relatively simple survey, but the results proved valuable.

Today people often find it easier to count than think, and the literature over the past dozen years or so is filled with reports of the counting of journal citations, uses, and lists. Quantification can be a useful procedure, but it must be used by individuals who can think through all the ramifications and the exceptions. In 1960 Raisig wrote an important paper on counting. He concluded his text by stating, "In practical applications, sound judgment as well as mathematical tabulation is needed to assure objectivity."<sup>17</sup> Sengupta slightly refined the citation-counting procedure by using volumes of the *Annual Review of Medicine* as the source for his measurement of impact.<sup>18</sup> His figures are of some interest to the selector, but they must be used with caution.

Another related record open to the selector of journals is that of the "half-life" of the literature in his subject area or areas. Burton and Kebler examined obsolescence in scientific literature on the analogy of the half-life of radioactive substances.<sup>19</sup> Using citation counting as their standard tool, the authors calculated graphical illustrations of obsolescence in several scientific projects. Many authors have criticized, modified, and supported these techniques of citation-counting and calculation of obsolescence. Brookes cautioned

the reader that citation counting raises many questions that must be examined by careful studies of library usage.<sup>20</sup> Sandison added "use-per-item" figures to the picture and emphasized the importance of the "item-consultation decay rate."<sup>21</sup>

Just how does the selector use the above-mentioned records derived either from the work of others or from his own efforts? Frick and Ginski<sup>22</sup> and McMurtray and Ginski<sup>23</sup> have studied the cardiovascular serial literature and have shown the practicability of this approach in determining necessary journals.

#### ACQUISITION

Improved keeping and availability of records is one of the major benefits that often results from automating procedures in a library. While not all libraries can answer their problems by automation, and while not all automated programs are successful, automation can produce a wide variety of records on demand. Divett, who has done some interesting work in this area, especially in acquisition, has described the philosophy and practice that initiated the program in the University of New Mexico School of Medicine Library in 1963.<sup>24</sup> An IBM 407 Model E8 accounting machine was the basis for this program. The records involved in acquisitions are described in detail. Interestingly, Divett makes a point of stating that no attempt was made to use mechanized methods for selection. Since Divett had chosen his staff on the basis of their enthusiasm for the mechanization program there was no problem of instilling new outlooks and habits in staff members.

The importance of records imaginatively conceived, speedily produced, and widely available can not be overemphasized. However, systems (whether automated or manual) for producing such records seldom spring into operation in a completely successful manner. Reports of problems, blind alleys, and outright failures are just as important to medical libraries planning their own programs (or thinking about planning them) as the glittering success stories.

A negative report in the popular area of approval plan purchasing was recently made by Rouse.<sup>25</sup> Although this was a university library, the lessons contained in the report are of considerable pertinence to medical libraries.

#### CATALOGING AND CLASSIFICATION

One of the great benefits of automated programs is the efficient multiple uses to which they can put the unit record. The easy

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manipulation of machine-stored and produced records has led to some interesting comparisons with conventional catalog records. Roberts examined the physical characteristics of the acquisitions-cataloging record at the Washington University School of Medicine Library and several other biomedical libraries,<sup>26</sup> and then in a companion paper she investigated the problems involved in alphabetization of the book catalog.<sup>27</sup> Potential changes and improvements grew out of the records of these two investigations. A combination of automation and visual inspection was suggested as the best way to handle the final step in alphabetization.

This same library, early in its automated program, produced a computer-printed book catalog which was used in conjunction with the traditional card catalog. An experimental study of the book catalog was carried out for four months in an attempt to see if the book catalog could stand by itself; it failed, and plans are now underway for a new program using a newer computer. Bolef, *et al.*, have reported the experiment, the problems, and the results.<sup>28</sup>

Computerized cataloging and the resulting records can be of value to groups of libraries as well as to individual libraries. Pizer<sup>29</sup> and Cain<sup>30</sup> have described some of the programs at SUNY. Cain's paper is particularly relevant here because he understood some of the major problems and dangers that can result from an increased facility to produce and manipulate records. He remarked that "In the course of this study, it has been tempting to go too far in producing quaint measurements."<sup>31</sup> His conclusion is worth attention, especially the first sentences: "All libraries keep statistical records, and some are of value. It very often happens, however, that when a new project is started, it is discovered that the figures required to measure the size of the problem are the very ones which have never been recorded."<sup>32</sup>

Pachefsky saw a trend toward the divided catalog which was in major part the effect of increased use of MeSH, and asked: "What type of card catalog best meets the needs of library users?"<sup>33</sup>—a question that not only medical librarians frequently forget to take into account in both daily routines and planning for future programs.

It is one thing to produce records of books in a medical library and a completely different matter to record (or even be interested in) the use of these records by readers. Brooks and Kilgour made one of these rare studies and showed differences in the needs of library staff and users and the lack of certain vital information.<sup>34</sup>

Tagliacozzo, *et al.*, recorded a similar study of four libraries, one of which was medical.<sup>35</sup> Of some interest is the fact that a higher proportion of the users of the medical library than of any of the others were unable to find cards which were in the card catalog. At the 1960 MLA convention Darling read an enlightening and thought-provoking paper on readers' impressions of the subject catalog.<sup>36</sup>

Small medical libraries face special dangers in their approaches to cataloging and classification, as Waller realized.<sup>37</sup> Their emphasis should be on consistent and simplified records that meet the needs of the users and can be produced by the available staff.

The move toward a standard classification system for medical materials is a major trend especially evident during the past decade. This formalization and rigidifying of the library's record, which is the main interface between users and the materials and information they need, is a serious matter that needs thorough and detailed study.

The development and production of *Current Catalog* has been described by Weiss and Wiggins, who have discussed in detail the records necessary for the production of this valuable tool and some of its potential uses.<sup>38</sup> The medium-sized and small libraries in particular have drawn on the *Current Catalog*. Wiggins expanded on the background, birth and early days of this publication, and in the conclusion of her paper quoted a poem written by one of the NLM catalogers shortly after the computer-aided cataloging program got underway:

I'm just a cataloger of commas  
 Preceded by pluses and paired;  
 My status is gone, I'm only a pawn,  
 Automated, frustrated, and scared.<sup>39</sup>

Whatever the merit of these lines as poetry there is an intriguing parallel to some of the problems in modern medical education. Recordkeeping for books includes intellectual activity on the part of library staff and users just as education for the practice of medicine involves human relations and sympathetic understanding.

Cain described one approach for adjusting library practices to the needs and habits of the user which examined the terms used by researchers with the pertinent headings in MeSH.<sup>40</sup> Another approach to this same basic problem of meshing records with the needs of two different groups is shown by the guide to biomedical

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research terminology developed by Schultz for the Federation of American Societies for Experimental Biology.<sup>41</sup>

The number of classification systems available to the medical librarian is slowly decreasing. Many medical libraries have been switching to the NLM system; several libraries in converting, however, made the error of relying on government funds to support the switch and have been left in a classification limbo.

#### CIRCULATION

The selection, acquisition, and processing of library materials are simply necessary steps toward making information accessible, and circulation and reference are two major ways of accomplishing this. As Herrmann has pointed out, "In order to run a satisfactory circulation system, the librarian must keep accurate records."<sup>42</sup> More than accurate records are needed, and this added something has been underlined by Andrews.<sup>43</sup> In a paper which deals primarily with the equations and cost factors needed to determine the most effective and efficient methods for selection of materials for storage, Andrews has included what she calls the "delay cost." This little item is of substantial importance because it emphasizes the importance of service to readers.

The choice of a circulation system is a major one in planning a new library. McGee has analyzed the key factors in the analysis and design of circulation systems.<sup>44</sup> Medical libraries differ from many other libraries in their basic circulation needs since the medical library usually wants to be able to obtain an item in circulation at any time rather than just know when it is due. Livingston drew this distinction clearly in an informative and thought-provoking article.<sup>45</sup>

A study of circulation policies in health science libraries was made in 1970 by Watkins and Coker.<sup>46</sup> The records resulting from this survey show an intriguing relationship between size of student body, faculty, and library staff; annual budget and circulation; and restrictive circulation policies.

The computer has presented excellent opportunities for change in circulation systems and the recording of the use of library materials borrowed by readers. The information provided by computerized systems was matched to the basic needs of the medical library by Balkema.<sup>47</sup> His paper is a good starting point for any medical librarian contemplating a new circulation system or a change from the system now in operation.

## CHANGES IN RESPONSIBILITIES AND USER GROUPS

User groups, both current and potential, for medical libraries are continually changing. The librarian has to maintain an interest in both groups, and some of his decisions have to be truly administrative, i.e., made before all the facts have been obtained. Records of use, expressed needs, and overheard remarks must be taken into account. Imagination and creativity are often greater needs in evaluating this area than are hard numerical records. The following points are made to suggest sources of records, methods of using records no matter how sketchy, and, finally to steer a reasonable course between hard and not-so-hard foundations for decision.

Herrmann has stated the sole aim for the existence of a medical library: "If a library does not give good service, the library fails."<sup>48</sup> Realistic views of the library's services from the other side of the desk are vital and sometimes hard to acquire. Some productive methods include a sensitive staff member at that location and a broadminded relationship with the library committee. Sometimes anonymity will encourage such expressions, and the *Library Journal* provided such an opportunity for a reader in 1962, who vented his spleen especially on the catalog entries. After citing several examples he made a plea for a practical approach and wound up by asserting, "Heresy, you say? But practical, serviceable nonconformity."<sup>49</sup> A hospital medical librarian has looked at the matter from another viewpoint; Thompson wrote "I like to think of our clientele as concerned users, because a *concerned user* is an important factor in quality library service."<sup>50</sup> Services should be geared to the real needs of the users, not necessarily to their expressed needs, and certainly not to the purpose of showing off flashy mechanisms when a simple approach would be better. Atwood combined these concepts in her term "rutless reference."<sup>51</sup>

Advice from nonlibrarians can also be of assistance in adjusting a library's responsibilities and in identifying changing user groups. Bayley, a hospital administrator, stated the case well for the majority of medical libraries.<sup>52</sup> Her conclusion was that the quality and scope of library services rest ultimately on the quality and creativity of the librarian involved. DuVal expressed the same attitude toward medical school and medical center librarians.<sup>53</sup> These, he felt, should place more emphasis on internal research, educating users for more efficient handling of scientific information, and the conversion of libraries from passive to active institutions.

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Records and effective recordkeeping imply the availability of information. In this interpretation librarians will draw on effective recordkeeping for their awareness of changing responsibilities and user groups and for designing the approaches and methods for the active handling of these changes.

The study of users—what they do, what they think they need, what they really need—is a foundation for improved services. Rees has outlined some basic steps and concepts for such investigations,<sup>54</sup> and Orr, *et al.*, have reported the techniques and results of a major survey of user services offered by medical school libraries.<sup>55</sup> Simply put, one has to know where one is before one can decide sensibly where to go and how to get there. Carefully designed and accurate records obviously play a major role in these steps.

A valuable conceptual model of the scientist as an information processor has been developed by Orr.<sup>56</sup> This detailed paper not only contains a vast amount of information but also suggests, both directly and indirectly, additional material to be recorded, analyzed, and transformed into improvements in the efficient transfer of biomedical information.

New services that are becoming more generally offered to users of larger medical libraries include the provision of tapes and the searches derived from these, the availability of electronic carrels for undergraduate, graduate, and postgraduate education, and the use of new mechanisms such as the automatic bookstack system at the new Health Sciences Library at Ohio State University. Prior has described this system, and drawn attention to some of its implications.<sup>57</sup> The lack of "browsability" must be counteracted by an increased reference staff. In one sense, the greater the distance kept between user and book, the easier it is to keep detailed records of the use. This is oversimplification to a certain extent, but the inherent opposition between recorded use and flexible use is a real one that must be kept in mind.

The changes in user groups often involve additional links in a chain. Kovacs stated this situation clearly when she wrote "A vast majority of persons using the Medical Research Library of Brooklyn collection are not aware of this. . . . Little do they realize that [their request made at another library] was actually serviced by the Medical Research Library of Brooklyn through established channels—saving them time and money—and, most important of all, satisfactorily fulfilling their needs."<sup>58</sup> Here is a whole new field for the development and keeping of records and for their efficient and

telling use. To paraphrase the producer of the most popular book of records on the scene today, "Records are good for you"—if you keep the right ones and if you use them knowledgeably.

Changing patterns in education bring about, or should bring about, changing patterns of library responsibilities and services. A clear example of this is found in nursing education. Miller has briefly surveyed what happens to the libraries of nursing schools in the transition from hospital to academic surroundings.<sup>59</sup> Many thought-provoking questions are raised in this sampling.

From time to time an individual librarian will come up with a new approach based on an understanding of user habits and needs. Fulcher has described her Literature Attached to the Chart (LATCH) program that responds to requests from doctors and nurses who need articles for the better care of specific patients.<sup>60</sup> The recorded use of this program suggests that it has provided a practical response to a previously unstated, but very real, need.

One of the earliest statewide systems of medical information services was initiated by the University of Wisconsin Medical Library. Holtz and Crawford began their accounts of the statewide programs by saying that "information and education are the inseparable Siamese twins of medicine. Without one the other will not thrive. Without both, physicians cannot be expected to provide the best in up-to-date medical care for their patients."<sup>61</sup> Not only is a wide variety of services being offered through the library, but the services are being used by a wide variety of health sciences personnel; the library is amassing valuable records to document this. Platitudes are no longer sufficient to defend library services in these days of rising costs and shrinking budgets. The wise librarian will see that his library maintains pertinent records that will demonstrate the usefulness and productivity of programs to those who are responsible for providing funds.

#### STUDIES OF USE

The way to find out what counts is not necessarily by counting it. "Statistical bibliography," a term that covers many varieties of counting, was defined by Raisig as "the assembling and interpretation of statistics relating to books and periodicals."<sup>62</sup> Raisig narrated the growth of several methods of statistical bibliography and pointed out many of the problems and fallacies involved in their use. Citations, to be of value in a productive counting process, must

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be within a logical stream of thought. Raisig developed this theme, and found a measure of research potential realized. This thought-provoking analytic study should be read by all individuals who are thinking either of reading and using reports of a statistical bibliographic nature or of making such studies themselves. Five years later Raisig returned to this topic in a paper that asked if the circulation analysis of serial use was a numbers game or a key to service.<sup>63</sup> He described the failure of most such studies to take into account the intellectual use of the contents of the serials, of the physical handling of the serial units, or of the in-depth library use.

Trueswell's paper underscored the differences between "satisfying a percentage of user circulation requirements" and "satisfying a percentage of users."<sup>64</sup> In other words, any user's requirements could be fully, partially, or not at all satisfied. Studies of book use, too, must be made with care. Andrews developed a helpful model for determining "relative use" that could be widely applied.<sup>65</sup>

Not only must valid methods be worked out for recording the use of journals and books, but studies must be made of who the users are and what really are their information needs. Wood has written an article that offers good conceptual and practical approaches for obtaining these data.<sup>66</sup> Friedlander has studied how a group of clinicians search for information.<sup>67</sup> These studies also form a necessary part of the body of records vital to the provision of the best pertinent library services. Foundations for user studies and methods will be found in the reports by Sherrington<sup>68</sup> and Wood.<sup>69</sup>

Other elements besides the manipulation of books and journals and the avenues for locating information enter into the whole picture of the use of libraries. Economics plays a large role in these activities, and librarians have long been seeking ways in which the economic value of the transfer of information directly and indirectly promoted by libraries may be recorded and put to effective uses. Of considerable interest here are papers by Carlson on the economics of information transfer,<sup>70</sup> and by Martyn on the unintentional duplication of research.<sup>71</sup>

Stangl and Kilgour have described the results of their two surveys recording use of books and journals in the Yale Medical Library.<sup>72</sup> The first of these analyzed use by date of publication and subject, while the second dealt with type of user and subject. Both studies were based on an analysis of cancelled charge slips collected for a year. Oseasohn recorded the borrowing patterns by a group of practicing physicians in an urban community at a new medical

school. He began his paper with the straightforward statement, "If directors of medical libraries hope to influence quality of health services, they need to know what use is at present made of their collections by providers of medical care."<sup>73</sup> Also valuable are the papers by Kovacs, in which she analyzed circulation for a full year at a large library,<sup>74</sup> and by Gomes, in which she studied a random sample of requests made of a regional medical library to obtain information about both items used and the users of those items.<sup>75</sup>

Another survey was made at the Yale Medical Library for the purpose of determining which journals should be acquired in multiple subscriptions. Kilgour recorded, analyzed, and put to use a vast amount of data obtained in this survey.<sup>76</sup> A joint effort by Columbia and Yale was designed to develop a sound base for a computerized index of journal articles; Fleming and Kilgour analyzed the circulation records and produced a list of most frequently used journals.<sup>77</sup> The Yale portion of this list differed considerably from the earlier survey reported above.

A study was made at the Lane Medical Library of Stanford to test the assumptions: (1) that medical students would use increasingly more periodicals in each of their four years in school; (2) that students engaged in research would show a greater use of periodicals than nonresearch students; and (3) that the research use would be most pronounced during the preclinical years. Mick, *et al.* found that the first two assumptions held but that the third did not.<sup>78</sup> Such studies can be of special help to librarians who want to design a course on the use of the literature and present it at the most effective time.

While most records of use have dealt with journals, Raisig, *et al.*,<sup>79</sup> and Kilgour<sup>80</sup> have studied the use of books and have reported a variety of data. Douglas went a step further in a study that looked into both library use of books and journals and the actual purchasing of books for personal libraries.<sup>81</sup>

The studies so far described have dealt primarily with the circulation of library materials rather than the use of these materials in the library. It is much easier to record extra-library use because this can be done simply by counting slips or manipulating recorded data in a computer. However, something must be learned about what goes on inside the library. Recording these data is a more difficult process. Jain has developed procedures for measuring such in-library use, and the results of a broad variety of these investigations in medical libraries should provide some valuable

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records both for the solid information and for the conclusions that could be drawn from this factual base.<sup>82</sup> A beginning in this direction has been reported by Smith.<sup>83</sup>

If the user of a library reported that he could always find what he wanted in the library, that user would think justifiably that the millennium had arrived, and the librarian could justifiably accept this report as just one more warped comment. Nevertheless, availability is an important element in the recorded use of library materials. In one 12-day period at the Woodward Biomedical Library in Vancouver, 370 failures to find journals were noted in a report by Piternick.<sup>84</sup> Of these, 64 references, or 17 percent were in circulation. Since these 64 were just 4.7 percent of the total journals circulated during those 12 days, one might conclude that restricting circulation would not improve availability. The point of these records, however, is that hard data relative to what had been felt to be a major problem were now available and the problem could be solved in a logical manner.

Too much emphasis can be placed on counting the circulation and use of books and journals. This can lead to problems if the results of the counting are applied unthinkingly to acquisition, continuation of subscriptions, to removal to storage, or to disposal. The offhand statement, "It is not used—throw it out," is being increasingly heard as more and more counting is done. Each library is a unique institution and the librarian should evaluate the collection on the basis of those yardsticks he feels are most pertinent to his own situation. Administrations and curricula change, and libraries must be able to support the likely (as well as some unlikely) possibilities for the future. A librarian should use all of his extremities at the appropriate times: the head for thinking as well as the fingers and toes for counting.

#### INTERLIBRARY LOANS

Atwood asked the question, "What factors govern interlibrary loans?"<sup>85</sup> and then set about developing and keeping the records needed to answer her query. The data were recorded on IBM cards and, in the author's words, "The analytical capability of these files is astonishing. These records contain quantitative measurements of interlibrary loan characteristics. Investigations have led to changes in routines that greatly improve service. They have also engendered a new concept of the role of the interlibrary loan in the total library

function."<sup>86</sup> This paper is almost a textbook case of the way in which a question can be raised, the different elements and related aspects involved identified, the appropriate records designed and kept, and the resulting data analyzed so as to lead to meaningful changes in philosophy and actions.

### BUILDINGS

A paper by Beatty summarized a survey of twenty medical school libraries built between 1955 and 1961.<sup>87</sup> In a surprisingly high proportion the planning had been done solely by an architect and a nonlibrarian staff member of the school or the parent university. In these "nonlibrarian-planned" libraries the functional arrangements and traffic patterns for both people and materials were appalling. Adequate elevators were lacking in 40 percent of the libraries. Lack of space was another recurring problem; this was especially true of work room and staff space. Damage from water, usually from badly placed pipes or equipment or from poor quality construction, had occurred in almost half of these libraries. Noise, heating and cooling, and lighting problems were common.

A survey of the medical school libraries built in the 1960s was made by Beatty and Beatty;<sup>88</sup> this survey showed that a higher percentage of the libraries built in the 1960s are in separate buildings or in their own wings than was the case for the 1950s. Librarians were more closely involved in the planning of these libraries; improvements in functional arrangements and in traffic patterns are obvious. The typical library of the 1960s, in comparison with its predecessor of the 1950s, has more space (which frequently includes more work room and staff space, although this is often still insufficient), much more seating (and a higher proportion of carrels), and more study rooms. It is rare to see a 1960 library without an adequate, and often attractive, staff lounge. New elements common to the 1960 library include space for audiovisual materials and use (some facilities are strikingly functional and attractive), and space for computers, terminals, and related equipment. Some of the libraries that do not have the machines do have space that has been designed for their later installation and use.

Hospital libraries, which form the bulk of medical libraries in terms of numbers, have also shown some improvements in the last fifteen years. Some improvements have been brought about by the integration of two or three small libraries and the resulting increased

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leverage for more space and better planning. The employment of more professional librarians, either full- or part-time, has also helped to bring about more functional hospital libraries. The newer approaches to hospital library planning and remodelling have been surveyed by Hayne<sup>89</sup> and Beatty and Beatty.<sup>90</sup>

### STAFF

Any improvement in library operations must be initiated by a librarian (who may neither have had the idea in the first place nor provided the motivation for its initiation), and then put into operation by himself or a member of his staff. Basically, then, the quality of education and training of medical librarians has a profound effect on the quality and variety of services offered to the users of the library.

Steinke has written a practical guide for the orientation and training of the nonprofessional member of the library staff.<sup>91</sup> The growth of the library technical assistant field has created both problems and opportunities. The program has suffered recently from the current economic situation and more particularly from straitened budgets in medical libraries. Librarians have, however, frequently been able to offer library technical assistants higher salaries than clerks and have obtained a higher quality of work.

The attitudes and actions of library staff members are a vital element in services to users. A healthy trend during the past few years has been toward the realization that information resides in human minds as well as in printed books and magnetic tape. If the assumption is made that the user should receive his answer as quickly and painlessly as possible, then the library staff member will feel free to seek help from a subject specialist. Adelman has described his philosophy and the related practices.<sup>92</sup>

Basic to the staff member's outlook are two assumptions. Wade has succinctly identified one, "We are here to serve readers, not machines,"<sup>93</sup> and Sable has spoken out against the decline in importance of the concept of service.<sup>94</sup>

### NLM RESOURCES GRANT PROGRAM

When the planning for the Medical Library Assistance Act completed its long gestation, the statements about the goals for the act were quite explicit. Particularly for the resource grants, the NLM had two objectives: "(1) to make a significant but relatively

short-term grant to bring basic resources to a more useful level, and (2) to encourage increased support to the library by the parent institution on a continuing basis to compensate for the decreasing federal contribution."<sup>95</sup> In the mass of material explicating the act and demonstrating its responsiveness to the felt needs of the time, the emphasis was both directly and indirectly placed on improved services. That this was the most appropriate direction for this part of the act's programs was clearly understood by the librarian of the first Regional Medical Library who also foresaw some dangers. Esterquest feared that such support would have only a short-term effect because, as he stated, "a hospital library is improved only when enough of the doctors who use it complain, in the right quarters, about its inadequacies."<sup>96</sup>

At the conclusion of the five-year term of the MLAA, Broering reviewed the results of the resource grants and looked toward the future. He pointed out that the basic purpose was to improve library services and to stimulate increasing local support. The results were not overwhelmingly impressive: "Only in a relative handful of instances were funds used in a planned, cohesive, and purposeful way to directly improve services to users."<sup>97</sup> Short-term gains were noted, but demonstration of lasting results and guaranteed future improvements was doubtful. In their review of the whole extramural program at the same time, Cummings and Corning commented that most libraries that had received resource grants "did not use the funds to improve the nature and scope of services through increased manpower or by the application of new technology."<sup>98</sup>

The MLAA was then renewed for three years and, at the conclusion of this renewal, Broering again reviewed the resource grant situation.<sup>99</sup> By this time NLM had a much clearer picture of requirements, requests, and reactions. Broering stated that the local libraries must now develop continuing local support by the high quality of their services and programs. In other words, the burden for thoughtful responses to stated or potential needs for services rests on the local librarians, which is where the RMP library projects had placed it from the start.

There is no question that the MLAA has improved medical libraries by its resource grant program. How much this program has improved the lot of the users of medical libraries is a question medical librarians will have to answer for and by themselves. Perhaps the most effective way to improve library services is through improving the quality of the librarians who give those services.

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### MANAGEMENT

Librarians over the years have shown a lack of interest in "administrative know-how." Simon has emphasized the importance of this skill in an article that offers practical advice and draws some useful distinctions.<sup>100</sup>

One of the traps into which some librarians fall is "thinking big"—that bigger is better, and ultimately that size and its increase is more important than what is done with the things, space, and people that make up that size. Horn has taken a strong and clear-eyed look at this philosophy.<sup>101</sup> Increased size often leads to computerization and certain benefits can be achieved by playing these two concepts in tandem. In a thought-provoking article Kilgour showed the relationship between evolving, computerizing, and personalizing.<sup>102</sup> Computers, in his view, can present opportunities for librarians to devote more of their time and effort to personal work with users.

Program budgeting and work measurement are coming more and more into the medical library management picture. The article on this subject by Schultz, although written for law libraries, has much of value for medical librarians.<sup>103</sup> Budgeting can be used in devious as well as routine ways. Perrine showed the "hidden costs of broom closet libraries" in a paper that gave a practical approach for handling the departmental library problem.<sup>104</sup>

Not only does the manager have to plan and design, he has to be aware of what is actually going on and how things can be modified, expanded, or corrected. Kronick has examined the varieties of information requests received in his library and drawn some valuable conclusions.<sup>105</sup> Zachert illustrated the uses of reference service records in a pharmacy library.<sup>106</sup>

Evaluation can be a valuable tool for both the present and the future. Huntley described how she approached this in both a logical and an imaginative manner. She concluded by saying, "There are many ways to view every aspect of a library's activities and many ways to solve each problem. But for each library there is one best way. The real challenge to a librarian is to find the best way to meet the particular needs of the particular library so that maximum effectiveness can be achieved in its own particular role."<sup>107</sup> Evans, *et al.*, have reviewed the criteria used to measure library effectiveness,<sup>108</sup> and Morse has taken a somewhat more general and mathematical view of the same topic.<sup>109</sup> Thomas entitled her valuable article on effectiveness simply "Looking at Libraries," and the implication of the librarian who looks but does not see

underscores her viewpoint and suggestions.<sup>110</sup> Huntley and Orrok have provided guidance for the many hospital librarians by developing a hospital library profile as an evaluation mechanism.<sup>111</sup>

Standardized tests of a library's ability to deliver documents were developed by Orr and Schless and then used in a major survey.<sup>112</sup>

### PROCESSING

Improvements in the operation of medical libraries during the past fifteen years are often associated in librarians' minds with automation and, while automated methods have frequently proved valuable, creativity and awareness are also vital elements for the medical librarian who seeks to provide the best services for the users of his library. This is borne out by observation of such a simple and basic task as book labeling. Books have to be labeled, however, and delays or inefficiency in this process mean less speedy and poorer service for the users.

Recordkeeping can have profound effects on both the present and future activities of medical libraries. The medical librarian who wants to know where his library is can, by the suitable interpretation of the appropriate records, gain a good idea of the present picture. By designing practical and imaginative systems of recordkeeping, the same librarian can be assured of keeping in close, realistic touch with his library's programs in the future. Records may be kept in the form of printed figures, charges on a magnetic tape, or even by such a primitive mechanism as the brain of a librarian who has learned how to listen and observe. Any record, however, only achieves its fullest value when it becomes an element for the improvement of services.

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