



User and User Services in Health Sciences Libraries: 1945-1965

MILDRED C. LANGNER

THE LITERATURE ON health sciences libraries in the United States and Canada from 1945 to 1965 reveals a vast amount of activity in the field of user services and shows that, despite the almost insurmountable problems encountered due to unprecedented increases in the literature and in use of libraries, many goals were reached and important results were realized.

While endeavoring to point out these developments, this review will not dwell upon the basic reference and fact-location assistance with which many library users are the most familiar. These services, perhaps because they are so universally expected and accepted, have not been emphasized in the literature, consequently, it is difficult to document them.

Attention here will be directed to discussions of those important behind-the-scenes, reference-related activities—such as special and interlibrary cooperative services—to which there are many references in the literature. Not considered are selection, acquisition, cataloging and classification, which fit more pertinently within the realm of technical services. Circulation procedures also will be omitted.

The year 1945 introduced the tumultuous period immediately following World War II when unbelievable developments in the fields of research, education and technology were demonstrating the overwhelming results which could be achieved when massive research and development funds were applied to predetermined objectives, and when the need for worldwide cooperation was strongly manifesting itself. When UNESCO was chartered in this momentous year it had as its principal aim the attaining of international cooperation on a huge overall scale. With government

Mildred C. Langner is Director, Louis Calder Memorial Library, University of Miami School of Medicine, Miami, Florida.

programs—particularly in the fields of defense and space exploration—leading the way, society as a whole began to devote gigantic sums to scientific research and technical development. “For the first time in the history of the world a nation deliberately mobilized all its relevant resources to achieve radical and comprehensive technological innovation as rapidly as possible.”¹

One of the most noticeable results of this research was the fantastically rapid increase in the amount of recorded information produced, especially in the fields of medicine, biological and physical sciences, and engineering. The number of books published in these fields increased from approximately 1,500 in 1940 to nearly 5,000 in 1965, the publication of new journals grew by large numbers, and countless unpublished research reports multiplied astronomically, setting the trend for the “information explosion.”

Throughout all this turbulence, librarians attempted to give the scientific research worker the best possible service, but neither they, nor perhaps even the researcher himself, knew exactly what was needed from the library. The war, however, had clearly demonstrated to many scientists the vital place of an efficient information service. Their experience, together with the much wider range over which research now had to be carried out and the necessity for scientists to familiarize themselves with entirely new and multifaceted subjects, had put a premium on information gained from libraries rather than from means such as slowly acquired experience, conferences and personal correspondence. With this understanding came the realization that the complexity of science had grown to such a degree that library and information service was an important key to the world of advancing knowledge.

How the health sciences libraries responded to this challenge is vividly described by Friedrich:

The war had demonstrated how inefficient were many of the peacetime methods of medical libraries. For example, where the medical librarian once probably seemed to rely largely upon memory and often to make somewhat vague generalizations, a need for speed and accuracy under heightened war pressure necessitated more accurate record-keeping and prompt, specific information. Details of record-keeping became streamlined; time required for library operations was now of first importance. Duplication of effort had to be eliminated. As demands for reference service increased, short cuts of all kinds were utilized.

User and User Services

Service, unlimited service, became the slogan of medical libraries. The more work that was done for people and for agencies, the more they demanded. What formerly was given as an occasional favor was now demanded and was expected as if it were a long-established right. Dormant powers and potentialities of medical librarians sprang to life when the entire medical and governmental staff turned to them for help.²

Marshall, too, pointed out the extended service which librarians would be called upon to give. She outlined new programs in education and research that would make extensive demands upon medical librarians and urged them to be prepared to face the future.³

Forewarned both by exhortation and personal experience, librarians endeavored to meet the deluge of requests that poured in upon them, but finding the means to answer these requests was most difficult because, although millions of dollars had been allocated to research, very little had been provided for the correlation of research, and the need for library support in this field had hardly even been recognized.⁴

It was time, therefore, to look at the entire health sciences libraries picture. It was not a particularly bright one. Faced with the need to provide increased services, yet well aware of the deficiencies in number and size of the existing health sciences libraries, librarians and administrators began concerted studies to meet this crisis. A study by Deitrick and Berson in 1953 pointed out that the plight of the medical library was serious.⁵ In 1963 Adams said:

Today, ten years and some hundreds of millions of research dollars later, [than the Deitrick report] it is stated with increasing frequency that the medical libraries are worse off than ever before. Last November the National Advisory Health Council submitted a resolution to the Surgeon General. "The medical library network," the resolution reads, "which has been designed to make the published record of medicine available, is in dire trouble. During a period of intensive development of research institutions, medical schools, and other medical facilities, their essential library support has been seriously neglected. In recent years the needs for adequate library working and storage space, for more trained library personnel, and for new methods of handling and disseminating the growing scientific medical literature have become acute."⁶

Meanwhile the National Advisory Health Council and other professional science groups became increasingly alarmed concerning medical libraries' ability to provide comprehensive service for education and research. The National Library of Medicine had long been concerned with this problem. Consequently it determined that data on medical school libraries which would show most clearly what research facilities were available, should be collected in order that the overall condition could be assessed. Harold Bloomquist was asked to survey these libraries and to prepare a report of his findings. His account appeared in 1963 and showed what services were actually being performed and what special services librarians wished to provide but could not because of lack of funds.⁷

It was obvious from the report that in individual library collections varying from 12,000 to 340,446 volumes with a median of 54,779 volumes, very little support was generally available to provide any but the most basic reference service. It was also clear that with a total of only 324 professional librarians employed in U.S. medical school libraries in 1961, only a small percentage were strictly reference librarians available to serve on a full-time basis as members of the health research teams of their parent institutions. It was evident that such a situation could not continue in face of the great demands made upon libraries beginning in 1945 and accumulating explosively every year since then.

Awareness of the plight of libraries led the scientific community to wonder if they could rise to the challenge to meet the demands of the research community. Some scientists thought not and felt that other types of institutions for supplying information should be found, thus ignoring the fact that the library has proved that it is as efficient an institution for storing and retrieving information as society has yet devised, and that reinforcing the foundation and types of services already supplied by libraries would enable them to meet demands as they always have.⁸

In the meantime, health sciences librarians were quickly adjusting to the new era and were busy providing the different approach to services necessitated by changing trends. Many of them had had very little specialized training but, filled with the willingness to serve, they had developed a sophistication in the area of user services in response to the need for these services in their libraries. Bloomquist, despite the gloomy results revealed by his survey, could still say: "The best medical librarians are virtuosos in the area of services to

User and User Services

readers. Training, the desire to serve, and imagination are the prime requisites."⁹

Arturo Castiglioni, the famous historian, in recognition of the medical librarians' philosophy of service, gave this unusually fine tribute to them:

I think it is possible and obvious to discuss and disagree on different ways of education in different schools and countries, on various tendencies and various degrees of humanistic or historical trends in medical studies. But there is one subject on which, I am quite sure, all those who are able to pass judgment on the evolution of medical thought must agree, that is the remarkable, decisive influence that the splendid organization of the American medical libraries and the work of their librarians has had in the progress of medical science in this country.¹⁰

TYPES OF HEALTH SCIENCES LIBRARIES

What were the libraries like in this particular period? What user services were they giving? What users frequented those libraries? Health sciences libraries were of many types: government, professional school, society, hospital, state, industrial and divisions of public libraries.

GOVERNMENT

The largest library of this important group was the national library, which finally received its proper title as the National Library of Medicine. From its very beginning it had rendered generous reference services on a national and international basis. Its activities have been thoroughly described through the years in its annual reports as well as in other articles, and its importance as one of the great libraries of the world is fully recognized and appreciated. (See Additional References.)

The Veterans Administration also carried on an extensive library program featuring a Central Office Reference System.¹¹ Other forms of government libraries were those connected with state, county and regional departments of public health.¹²

SOCIETY

Society libraries have long been noted for special services to their patrons. The specifically unusual activity which first comes to mind

MILDRED C. LANGNER

is the "package library" sponsored by the American Medical Association, the American Dental Association and the American College of Surgeons. As early as 1934 as many as six staff members were employed in this service at the American Medical Association Library.¹³

The largest society libraries were the New York Academy of Medicine, the Kings County Medical Society, the College of Physicians of Philadelphia and the Boston Medical Library, later to be incorporated with the Harvard Medical School Library and renamed the Francis A. Countway Library of Medicine.¹⁴ This amalgamation was one of several brought about during this period by the financial plight of rising costs. Medical societies could no longer carry the heavy burden of a separate library, and even though their members feared that many special services would be lost to them, there was no alternative but to combine with medical school libraries. A symposium on this newly developing pattern appeared in 1962.¹⁵

PROFESSIONAL SCHOOL AND RESEARCH

Professional school libraries and research libraries such as the Mayo Clinic Library and the John Crerar Library formed the largest group. Their collections covered areas of medicine, dentistry, pharmacy and nursing, and were usually more extensive than those of hospitals and of society libraries. Their staffs and user groups, too, were larger and so was their group of users. Some of them provided extensive bibliographic research and other special reference services.

From the 1940s to the early 1960s there were many articles describing the multitudinous approaches to provision of service in the various school libraries: Troxel and Robinson debated the advantages and disadvantages of a combined medical-dental-pharmacy library.¹⁶ Lentz described medical school library service, saying: "The library is an integral part of the medical school and though some may think it is quite removed from the drama of medicine, one soon finds that there is much here related to the battle to save and prolong human life."¹⁷

Morrissey discussed the library's place in the nursing school, pointing out the responsibility of the librarian: "Her imagination must constantly be at work and she must always be willing to employ all of her resources both native and acquired for the good of the

User and User Services

family, which in this case is the faculty and the students in the school of nursing.¹⁸

HOSPITAL

Hospital libraries during this period were usually associated with the larger hospitals. Only later would many small-to-medium sized hospitals develop libraries of their own. The literature of 1945-65 depicts the special services for which the hospital libraries were noted and shows why this type of library rapidly became more important to the health sciences community and why more emphasis would be placed upon it by leaders in the field of medical education. (See Additional References.)

Many public libraries were also active in carrying on extensive medically related programs for the blind and handicapped.¹⁹ Many specialized in work with children in hospitals and institutions.²⁰

INDUSTRY

Descriptions of the special reference services offered by pharmaceutical company libraries clearly show why they have always been considered leaders in this area. (See Additional References.) Bloomquist states that:

They are financially better supported. There are funds for more and better trained personnel, for mechanized devices to streamline routines, and funds simply to turn into action those ideas which will meet the assessed needs of the community to be served. The motivation in pharmaceutical houses is neither benevolence nor extravagance; it is simply a matter of economic self-interest. To them cost studies have indicated that money spent in library services saves money elsewhere or makes money elsewhere.²¹

UNIVERSITY AND PUBLIC

Health sciences libraries, university libraries and public libraries have been closely associated throughout the years. A study of the literature shows that the main projects connected with bibliography, bibliographic control and interlibrary loan procedures have been cooperative ones with leaders in all three fields displaying great interest in improvements which would be of help to all.

Reference methods were approximately the same in the three

types, except that perhaps the health sciences libraries maintained stronger and more sustained emphasis upon personal assistance. This emphasis was especially evident in clinical areas where emergency, "spoon-fed" service was offered to busy practitioners in their patient care activities.

Long ago Garrison pointed out that: "the university librarian and his medical librarian, can exist and function side by side without friction and with mutual benefit. In the case of the individual medical library of a community, the chief will find himself continually in need of cooperation with his colleagues of the municipal or university library and *vice versa*."²²

Librarians of public and academic libraries usually directed professional and technical medicine-related requests to the medical library, and they have long felt that the assembling of an extensive medical collection should be left to the large medical library of the community.

Radmacher, however, questioned how far the public library should go in selecting medical material. She pointed out that the public library's book selection policy must make available works representing conflicting points of view to enable the reader to broaden his scope and to form his own opinions, but wondered about this in relation to medicine and disease. She states that as a public librarian she would welcome more help from medical librarians.²³

Relegating questions to the medical libraries, however, did not mean that the other libraries relinquished all activities in the health sciences fields. Indeed, because of their broader coverage they were much better able to serve the peripheral areas such as behavioral and social sciences than was the medical library.

LIBRARY USERS

Users of the health sciences libraries were as varied as the types of libraries they patronized, and each group required special attention.

Classification of users was made in the 1940s by Cunningham who stated:

Reference aid in a medical library is needed by individuals who can be roughly grouped into four categories:

1. Professional.

This group includes: (a) members of university faculties, scientists and research workers accustomed to doing

User and User Services

bibliographic research; (b) patrons who know scientific literature and its scope thoroughly but are unaccustomed to the bibliographic tools; (c) busy practitioners who are often unfamiliar with the literature or tools, but who are faced with the problem of writing a paper or making a case report; (d) interns, young research workers engaged on their first original problems, and post-graduate students who have not had access to a library for a long time.

2. Semi- and pre-professional.

This group consists primarily of: (a) medical and pre-medical students; (b) student and graduate nurses; (c) dental students; (d) technicians; (e) free lance bibliographers; (f) ghost writers; and (g) secretaries working for doctors and scientists. Some of the individuals in this group will be comparatively unfamiliar with the medical literature or terminology, and they will frequently need to be shown how to use the books.

3. Professional laity.

This class is represented by: (a) lawyers; (b) industrial and sanitary engineers; (c) reporters; (d) clergymen; and (e) social service workers. They know little of medical literature or medical bibliographic tools, but their interest is of a technical nature. They are accustomed to gathering information from various sources, and therefore have the bibliographic approach.

4. Non-professional laity.

This group consists of: (a) readers sent by physicians with requests for specific books; (b) those who wish to study some particular diseases because they themselves or some member of their families are sufferers; (c) the small group of the morbidly curious; (d) the usual casual inquirers who wish the addresses of physicians, the names of hospitals or institutions; and (e) individuals who are writing papers for presentation before non-professional groups, women's clubs, etc.²⁴

PROFESSIONAL, STUDENT AND LAYMAN

Needs and demands of the professional clientele have been emphasized throughout the literature. (See Additional References.)

Student needs, too, have always been a most important

consideration in health sciences libraries and the students themselves have been eager to list their observations. (See Additional References.)

Service to the layman in health sciences libraries varied from none through guarded to full recognition of the need. The Medical Library Association devoted a session of its annual meeting to this important subject in which Biehler pondered "Who Is the Lay Public?" and King asked if lay material should be purchased and to what extent. Monahan narrated policies that society libraries have established to regulate use, while Clark described the services given and Chambers questioned what services *should* be given.²⁵

LIBRARY SERVICES

The term services covers a wide range of activities. Its whole concept, however, was succinctly, clearly and perceptively described long ago by a famous librarian, Samuel Green: "The more freely a librarian mingles with readers and the greater the amount of assistance he renders them, the more intense does the conviction of citizens, also, become, that the library is a useful institution, and the more willing do they grow to grant money in larger and larger sums to be used in buying books and employing additional assistants."²⁶ This idea has been reiterated *ad infinitum* throughout the years.

The areas of service which were covered, however, may be different and more inclusive than generally realized. It is certain that in some cases the desire to be helpful had reached the ultimate as exemplified in the statement made in 1896 by one of the founders of the Medical Library Association: "I take no credit for special fitness for the position except that I could fill the requisite that I must reside in the library building."²⁷ Evidently either this twenty-four-hour-a-day service was not terribly difficult or Marcia Noyes was of an extremely strong constitution because she lived a long life and left the memory of her devotion to her library engraved on the hearts of its users. Fundamentally, however, library service boils down to the provision of complete back-up support for the teaching, research and patient care needs of the environment served. Needless to say, all types and sizes of health sciences libraries are involved to some extent with these three basic interests of their users. This back up for the programs of the sponsoring institutions consisted mainly of provision of information or fact location, bibliography and interlibrary loans. However, librarians continued

User and User Services

to extend the scope of their reference services whenever possible and important trends were revealed.

SOME SPECIAL SERVICES

In the 1950s there appeared articles on changing concepts,²⁸ on present and potential services,²⁹ on the library research assistant,³⁰ and on the librarian as a member of the health research team.³¹ Suggestions were made that the reference librarian should be initially consulted when a book or article is contemplated and then expected to supply bibliographic references, abstracts, editorial and translation services, and to be involved with the project until publication.³² Protest to such active participation, however, rose to a crescendo with Goodall's article "The Place of the Librarian in the Medical Team."³³ There was some discussion that too much service was provided.³⁴ Most librarians, however, were undaunted by this reaction because the majority of their own patrons showed the desire and need for much additional help, including extension and bookmobile service.³⁵

TEACHING

Scores of articles were written on teaching the use of the library. Articles from a 1952 panel on the teaching of medical bibliography to medical, dental, pharmacy and graduate students pointed out the importance of teaching activity.³⁶ The panel advocated that time be allotted to teaching because of its value both to the students, who afterwards would become able to use the library with more skill and understanding, and to the library staff, who would not have to give so many separate instructions. The last article in this panel concerned on-the-job teaching of medical bibliography to medical librarians.³⁷

Other articles on teaching described orientation programs and teaching the use of the library in many types of health sciences libraries. (See Additional References.) Truelson pointed out that it was also the responsibility of the faculty to teach students the use of the library. He emphasized that: "Using the library is not a goal in itself; it is simply a necessary step to far higher and more exciting accomplishments. The librarians and the faculty, working together, can help to create both of the conditions for learning library skills: motivation and practice."³⁸

EXHIBITS

Exhibits formed an important part of the library's service to its users as they presented a visual means of imparting information over a period of time to many people. So important did the *Bulletin of the Medical Library Association* consider this subject of displays that prominence was given to many articles in its pages. For a time it designated a special section in its issues to this subject. (See Additional References.)

An important development in the exhibit area was the traveling exhibit, a splendid innovation which enabled the small libraries to reap the benefit of the extensive display material provided by one of the large medical center libraries.³⁹

TRANSLATION

Health sciences librarians were particularly concerned with the provision of translation services. Many libraries kept lists of local translators available for assistance, and some who had linguists on their staffs offered either long or short translations. Several articles pointed out important services and indexes available (see Additional References), and Parker and Hawkins prepared an important guide to sources and services.⁴⁰ Far reaching international scientific translation programs were carried on throughout this era by the National Library of Medicine, the National Institutes of Health, the National Science Foundation and other organizations.

EDITING

Editing was one of the services which all librarians could not give, even though most of them would have liked to do so. Among those who did offer this service were librarians who, in addition to teaching and lecturing on the subject, aided their readers by compiling instructions on scientific writing.⁴¹

BIBLIOTHERAPY

Bibliotherapy was a user service carried out more often in hospital libraries. The Veterans Administration and the American Hospital Association particularly have shown great interest in this subject. Reviews throughout the 1950s and 1960s gave prominence to accounts of this activity, and in 1958 an important development occurred.

The Bibliotherapy Committee, Association Hospital and Medical

User and User Services

Librarians, a division of the American Library Association has recently received the approval of the ALA executive board to proceed on the research project which will outline basic questions and identify areas worthy of research regarding the effects of reading in hospitals and institutions. Various foundations are interested in this project which will take about 18 months to complete.⁴²

IMPORTANT INTERLIBRARY COOPERATIVE SERVICES

INTERLIBRARY LOANS

Among the earliest interlibrary cooperative activities was that of interlibrary loans or document delivery service. That this activity was alive and flourishing in the 1930s is revealed by reading Archibald Malloch, one of the leading physician-librarians of this time: "The librarian of old would probably hold up his hands in horror at the thought of inter-library loans of which we hear so much. Many librarians now lend all but their oldest and best books to almost any other library in the country in this way, and very few volumes are lost in the express or mails. This is really lending a helping hand as well."⁴³

Long before this date, however, interlibrary loan service was carried out by many institutions. Samuel Green in 1876 had suggested that it would be a good and helpful thing if libraries would lend books to each other.⁴⁴ Later in 1891, in his presidential address to the ALA, he again advocated this action and noted that the library of the Surgeon General's office was already lending widely.⁴⁵

This library, later called the Army Medical Library, the Armed Forces Medical Library and finally the National Library of Medicine, remained the leader among health sciences libraries in lending its material. Its generosity was practically boundless, and thousands of libraries all over the world profited from its wonderful source of supply. Rogers expressed its generous lending policies when he said: "As one of the earliest American libraries to allow items in its collection to go beyond its own walls, and as a library which had raised its photocopying service to a high level, the N.L.M. has demonstrated time and again its concern with getting its holdings to the people who need them, wherever they may be."⁴⁶ He sorrowfully noted, however, that this bountiful policy could not continue forever, because the demand throughout the years had become so

insistent that it could not be fulfilled. Therefore in 1957 the National Library of Medicine was forced to change its lending policy.

The VA also had provided a generous interlibrary loan policy. Its Medical and General Reference Library served as its central office both lending to and borrowing for its field stations throughout the country. It also maintained reciprocal borrowing and lending policies with libraries outside the VA.⁴⁷

Many articles testify to the fact that interlibrary loan services were vitally important to health sciences libraries. Some of these showed the need for a uniform code. Some were pleas for service, usually from the smaller libraries, and some were justifications when curtailments were considered necessary by the lending—usually the larger—libraries.⁴⁸

Even though interlibrary loan service was most active and libraries were profiting by this exchange of material, it was obvious that lending of the actual original material was placing undue strain on the libraries involved. Various means of photocopy had been tried, but had been found time-consuming and expensive. These difficulties, however, did not daunt Atherton Seidell, a forward-thinking honorary consultant of the Army Medical Library and one of the foremost proponents of the importance of microfilm for document delivery service. While complimenting the work being done by health sciences librarians, he also chided them, stating that whereas they had in the first edition of the *Handbook of Medical Library Practice* placed strong emphasis upon taking care of the needs of their readers, they had not mentioned "the particular application of microfilm copying by which persons at a distance may be supplied with miniature photographic copies of the separate original articles in periodicals."⁴⁹ At the time of Seidell's initial efforts, he suffered the fate of most innovators because many individuals found microfilm processing inconvenient and cumbersome. By 1962, however, photocopy procedures had improved greatly. In that year the definitive publication on NLM's vast interlibrary loan program appeared.⁵⁰ Two years later an account depicting the photocopy experiences of the NLM's neighbor, the National Institutes of Health Library, was presented by Martin and Ferguson.⁵¹

Even with the advent of dry-process photocopy and the establishment of interlibrary loan codes it was clear that all was not functioning as smoothly as desired in this area of librarianship. At the time when the NLM stated that it would no longer lend to

User and User Services

individuals, its director laid down the policy which was to lead later to regionalization and to the establishment of a network of libraries for document delivery.⁵²

The abundance of literature on the important subject of interlibrary loans revealed that it was a formidable part of reference librarianship. It also emphasized that cooperation between health sciences libraries in the field of document delivery was a flourishing and most comprehensive activity.⁵³

REGIONALIZATION

Other library areas, however, were becoming more actively involved with interlibrary coordination. Amalgamation of society libraries with professional school libraries has already been mentioned. Regional activities including cooperative acquisitions programs and the centralized storing of esoteric resources began to increase in number. An important advancement toward cooperation took place when the Midwest Inter-library Center was established " '(1) To provide more adequate research materials for the needs of midwestern scholarship and research; and (2) To provide for economical and efficient utilization of resources to avoid needless duplication and expense.' These objectives go beyond the functions of any cooperative library now existing, and, thereby, offer the greater challenge to the librarians who determine whether the objectives of such an institution are successfully realized."⁵⁴

Later, members of the New York Medical Community gathered together for a conference on coordination among libraries of the area in which they found: "The time has come when a route must be chosen leading either forward to co-operation or backward to chaos."⁵⁵ Fortunately, the step forward was taken leading to the establishment of the Medical Library Center of New York.⁵⁶

BIBLIOGRAPHY AND RESEARCH

It was in the fields of cooperative bibliography and research, however, that the health sciences librarians were working most feverishly to supply the broadened approaches to and the centralized control of the vast literature now being produced so that they might more quickly and more comprehensively serve the needs of their library users. Morse, in reporting on the International Conference on Scientific Information, recognized their efforts by stating that the person expecting the ICSI to provide answers to most

of the problems of scientific literature would be disappointed because there is no foreseeable substitute for the imagination and experience of energetic librarians and information specialists.⁵⁷

In 1949 the Medical Library Association invited the then Librarian of Congress, Luther Evans, to address its membership on the important subject of cooperative bibliography. He admitted the immensity of the problem and pointed out that in a period which had witnessed rapid and extensive developments in the preparation of bibliographic tools the problem still remains. Evans deplored that adequate bibliography continued to be the principal obstacle in the realization of UNESCO goals: the promotion of knowledge and education; the dissemination of information; and the provision of understanding among the peoples of the world. Evans concluded with this pertinent call for cooperation: "Every library, whether it is called a bibliographic center or not, is one in reality; and I look forward to a time when the libraries of the nation and indeed of the world, will be recognized as a system of bibliographical centers, each contributing to the vital bibliographic organization of the world's knowledge and each drawing upon the entire system for the benefit of its clientele."⁵⁸

Health sciences librarians increased their cooperation activities by continuing their earlier successful efforts and pursuing many new projects. The important bibliographies produced and the accomplishments realized in improving, encouraging and coordinating indexing and abstracting services were many. Indeed the support given to the better integration of the total research effort was outstanding. A partial list of achievements includes:

1. the bibliographic control exercised from the beginning of its existence by the Army Medical Library, later the National Library of Medicine;
2. the Herculean efforts in coordinating indexing and abstracting services by the Medical Library Association in conjunction with other library and scientific organizations;
3. the publication of the excellent first edition of the *Handbook of Medical Library Practice* containing the impressive comprehensive "Annotated List of Reference Books;"
4. valuable contributions to bibliography and research by persons actively engaged in health sciences librarianship. These included special volumes of learned bibliographies and other reference tools such as histories, directories and dictionaries;

User and User Services

5. the day-by-day reference assistance and guidance extended wholeheartedly to their users by librarians of all types of libraries. This significant back-up support and participation in the educational, research and patient care activities of their users contributed greatly to the success of these projects throughout the years 1945-65.

THE NEW ERA IN INFORMATION RETRIEVAL

SELECTIVE DISSEMINATION OF INFORMATION PROGRAMS

At the same time that cooperative activities in the areas of abstracting and indexing were proceeding at a great rate, close attention was also being focused directly on the difficult problem of basic information retrieval both on a demand and continuing basis. Efforts to carry on selective dissemination of information programs were being made in some libraries. That these programs were facing a losing battle is obvious in retrospect, but the absolutely desperate attempt to supply what was so needed by library users is agonizingly delineated by Thomson, who describes the arduous ordeal endured in establishing a collection containing 80,000 papers and abstracts on cancer. He says that:

I have been slowly losing ground with masses of material waiting to be dealt with. I have no time for original research, and I feel that I am fighting a losing battle with the Frankenstein monster which I have created. To add to these difficulties I urgently need more room and more steel cases, but neither of these is available. . . . Now [the library] has reached important dimensions I felt that it should be kept up to date. Therein lies my difficulty. I am now very forcibly driven to the conclusion that this is not a task for one man with little assistance, but that it is an international affair, requiring much money and a number of highly qualified workers.⁵⁹

Fleming, discussing his more limited but more numerous SDI programs, called attention to their success and added: "The conclusion is inescapable that the libraries of the world must in the future play a far more decisive role than at present in increasing the productivity of research. One of the major ways in which university libraries can contribute is through the establishment of a continuous

bibliographic service for the scholars requiring their active support."⁶⁰

Fleming's point was an excellent one and one with which librarians firmly agreed. That such a continuous bibliographic service in the face of the literature explosion could not possibly proceed was becoming more evident as each day's mail delivery was received by the libraries of the world. Overwhelmed with the deluge, they sought new ways out of the difficulty. The most significant among these approaches was that to be soon realized in *mechanization*. This term, awesome in its primary implications, was to become one of the most important words in all activities connected with information retrieval during the coming years.

MECHANIZATION

The Army Medical Library, with its vast responsibilities for service, was among the first to consider automation. Its director asked the Surgeon General to appoint a committee of consultants for the study of the indexes to medical literature published by the library. This committee soon saw the hopelessness of manual retrieval and recommended that mechanization be investigated. Subsequently the NLM arranged for Sanford Larkey, under a contract between the NLM and the Johns Hopkins Institute for Cooperative Research, to conduct a research project at Welch Medical Library in Baltimore on problems of medical indexing, the evaluation and study of present indexes, the study of subject headings and the possibility of using machine methods in indexing.

In his first report in 1949 on this project to the MLA, Larkey stated: "There are many problems to be solved before final decisions can be reached as to the best and most efficient means of bibliographic control of our vast medical literature. The aim of the research project is to supply some factual answers to these questions."⁶¹

Factual answers regarding mechanization did come, and quickly, and for the next two years articles and reports continued to appear, detailing progress and pointing out the widespread participation by scientists and librarians in all aspects of the project.

A complete report entitled "The National Library of Medicine Index Mechanization Project" appeared in 1961, showing that computer indexing of medical serials was well on its way, and that the new bibliographic retrieval system, if not exactly the librarian's

User and User Services

perfect dream, was at least nearing that point.⁶² In 1963 "The MEDLARS Story"⁶³ appeared as well as Seymour Taine's comprehensive article on this new system.⁶⁴ By this time many users of libraries were beginning to take advantage of this much improved means of searching and retrieving the literature. Another long-sought goal of bettering service to library patrons had materialized and was functioning.

References

1. Lacy, Dan. "Social Change and the Library: 1945-1980." In Douglas M. Knight and E. Shepley Nourse, eds. *Libraries at Large*. New York, R.R. Bowker, 1969, p. 6.
2. Friedrich, Dorathea W. "The Effect of the War upon Medical Libraries and Their Probable Trends," *Bulletin of the Medical Library Association*, 34:60, April 1946.
3. Marshall, Mary Louise. "The Library and Medical Education in Postwar Years," *Bulletin of the Medical Library Association*, 32:407-10, Oct. 1944.
4. Larkey, Sanford V. "The Medical Library Association and Medical Research," *Bulletin of the Medical Library Association*, 38:291-95, Oct. 1950.
5. Deitrick, John E., and Berson, Robert C. *Medical Schools in the United States at Mid-Century*. New York, McGraw-Hill, 1953.
6. Adams, Scott. "Medical Library Resources and Their Development," *Journal of Medical Education*, 38:20, Jan. 1963.
7. Bloomquist, Harold. "The Status and Needs of Medical School Libraries in the United States," *Journal of Medical Education*, 38:145-63, March 1963.
8. Adams, *op. cit.*, p. 123.
9. Bloomquist, *op. cit.*, p. 155.
10. Castiglioni, Arturo. "Libraries and Librarians," *Bulletin of the Medical Library Association*, 34:182, July 1946.
11. Gartland, Henry J. "The Veterans Administration Medical Library Program, 1946-1956," *Bulletin of the Medical Library Association*, 45:389-98, July 1957; and Ricker, Eleanor L. "The Hospital Librarian in a Large Organization," *Special Libraries*, 48:455-57, Dec. 1957.
12. Poliakoff, Augusta. "Functional Medical Libraries for Medical Districts," *Bulletin of the Medical Library Association*, 33:473-81, Oct. 1945; Crawford, Helen. "Medical Library Extension Service," *Bulletin of the Medical Library Association*, 37:15-22, Jan. 1949; and Herman, Flora E. "The Public Health Library," *Bulletin of the Medical Library Association*, 43:212-16, April 1955.
13. Wilson, Harriet. "The Package Library," *Bulletin of the Medical Library Association*, 22:133-37, Jan. 1934.
14. Colby, Charles C., and Esterquest, Ralph T. "The Francis A. Countway Library of Medicine, Harvard Medical Library-Boston Medical

MILDRED C. LANGNER

Library," *Bulletin of the Medical Library Association*, 48:121-24, April 1960.

15. "The Medical Society in a Changing World; A Symposium," *Bulletin of the Medical Library Association*, 50:214-23, April 1962.

16. Troxel, Wilma, A. "Library Service for Modern Dental Education in a Combined Medical-Dental-Pharmacy Library," *Bulletin of the Medical Library Association*, 40:21-25, Jan. 1952; and Robinson, Arline. "The Separate Dental School Library," *Bulletin of the Medical Library Association*, 40:26-29, Jan. 1952.

17. Lentz, Robert T. "The Medical School Library," *Bulletin of the Medical Library Association*, 43:92, April 1955.

18. Morrissey, Mary. "Relation of Librarian to Nursing School Staff," *Bulletin of the Medical Library Association*, 44:454, Oct. 1956.

19. Greenaway, Emerson. "Library Services to the Blind and Other Handicapped Groups," *ALA Bulletin*, 55:320-23, April 1961.

20. Lunper, Hilda K. "The Public Library at Work With Children in Hospitals and Institutions," *ALA Bulletin*, 55:329-31, April 1961; and Sharp, E. Preston. "Philadelphia Team—Free Library and Youth Study Center," *ALA Bulletin*, 55:324-28, April 1961.

21. Bloomquist, *op. cit.*, p. 155.

22. Garrison, Fielding H. "The Medical Library in Relation to the University Library." In *Essays Offered to Herbert Putnam by His Colleagues and Friends*. . . . William W. Bishop and Andrew Keogh, eds. New Haven, Conn., Yale University Press, 1929, p. 167.

23. Radmacher, Mary. "Questionable Medical Literature and the Library: A Symposium; The Public Library," *Bulletin of the Medical Library Association*, 51:463-66, Oct. 1963.

24. Cunningham, Eileen R. "Reference Work." In Janet Doe, ed. *A Handbook of Medical Library Practice*. Chicago, ALA, 1943, pp. 373-74.

25. "Service to the Lay Public," *Bulletin of the Medical Library Association*, 43:241-61, April 1955.

26. Green, Samuel S. "Personal Relations Between Librarians and Readers," *Library Journal*, 1:81, 1876.

27. Noyes, Marcia. *Celebration of the Centennial of the Library of the Medical and Chirurgical Faculty of the State of Maryland*. Baltimore, 1931.

28. Keys, Thomas E. "Changing Concepts in Library Services," *Bulletin of the Medical Library Association*, 45:5-13, Jan. 1957.

29. Crowe, Mildred R. "The Medical School Library: Its Present and Potential Services," *Journal of Medical Education*, 30:497-503, Sept. 1955.

30. King, Henry H. "Assistance to the Faculty in Library Research: Report from Cornell University," *College & Research Libraries*, 9:227-30, July 1948.

31. Leake, Chauncey D. "Ideals for a Community Health Library," *Texas Reports on Biology and Medicine*, 13:420-33, Fall 1955.

32. Emery, Verna M. "The Medical Librarian's Role in Chronic Disease Research," *Libri*, 3:356-62, 1954.

33. Goodall, Archibald L. "The Place of the Librarian in the Medical Team," *Bulletin of the Medical Library Association*, 42:19-22, Jan. 1954.

34. Forscher, Bernard K. "Faculty Comments on the Dental School Library," *Bulletin of the Medical Library Association*, 49:83-90, Jan. 1961.

User and User Services

35. Crawford, *op. cit.*; and King, Louise D.C. "Availability of Medical Library Service" [Letter to the Editor]," *Bulletin of the Medical Library Association*, 44:488-89, Oct. 1956.
36. "Teaching of Medical Bibliography: Panel Discussion," *Bulletin of the Medical Library Association*, 40:355-68, Oct. 1952.
37. Brodman, Estelle. "Teaching Medical Bibliography to Medical Librarians," *Bulletin of the Medical Library Association*, 40:366-68, Oct. 1952.
38. Truelson, Stanley D. "Needed: Curriculum Reform [Guest Editorial]," *Bulletin of the Medical Library Association*, 49:635, Oct. 1961.
39. "UCLA Biomedical Library Traveling Exhibits," *Bulletin of the Medical Library Association*, 51:283, April 1963.
40. Parker, Sheila M., and Hawkins, Miriam. *Scientific Translations: A Guide to Sources and Services*. U.S. Department of Health, Education and Welfare, Public Health Service, 1959.
41. Crowe, Mildred R. "An Introduction to the Preparation and Writing of Articles for Medical Journals," *The Jefferson Hillman Hospital Bulletin*, 4:60-98, April 1950.
42. O'Toole, Margaret M. "Annual Administrative Reviews: Library Service," *Hospitals*, 32:55, April 16, 1958.
43. Noyes, *op. cit.*
44. Green, Samuel S. "The Lending of Books to One Another by Libraries [Letter]," *Library Journal*, 1(1):15-16, 1876.
45. _____. "Address of the President," *Library Journal*, 16(12):1-9, Dec. 1891.
46. Rogers, Frank B. "The Loan Policy of the National Library of Medicine," *Bulletin of the Medical Library Association*, 45:487, Oct. 1957.
47. McKenna, Muriel R. "The Veterans Administration and Interlibrary Loans," *Bulletin of the Medical Library Association*, 41:140-43, April 1953.
48. Ballard, James F. "Co-operation and Co-ordination in Special Library Work," *Bulletin of the Medical Library Association*, 24:149-54, Feb. 1936; Raymond, Jurgen G. "Interlibrary Loans," *Bulletin of the Medical Library Association*, 34:189-93, July 1946; and Ballard, James F. "Interlibrary Loans," *Bulletin of the Medical Library Association*, 34:196-97, July 1946.
49. Seidell, Atherton, "The Aims of Medical Library Service," *Bulletin of the Medical Library Association*, 34:336-37, Oct. 1946.
50. Kurth, William H. *Survey of the Interlibrary Loan Operations of the National Library of Medicine*. U.S. Department of Health, Education and Welfare, Public Health Service, April 1962.
51. Martin, Jess A., and Ferguson, M.S. "Photocopying in a Research Library," *Bulletin of the Medical Library Association*, 52:410-13, April 1964.
52. Rogers, *op. cit.*
53. Kennan, Elizabeth L. "Interlibrary Loan, 1952-62: Ten Years of Progress?" *Bulletin of the Medical Library Association*, 52:307-15, Jan. 1964; Esterquest, Ralph T. "Co-Operative Control of Library Resources: The Realities of Co-Operation," *Bulletin of the Medical Library Association*, 47:369-74, Oct. 1959; and Orr, Richard H., and Pings, Vern M. "Document Retrieval: The National Biomedical Library System and Interlibrary Loans," *Federation of American Societies for Experimental Biology Proceedings*, 23:1155-63, Sept. 1964.

MILDRED C. LANGNER

54. Minsk, Gertrude G. "Implications of the Midwest Inter-library Center for Medical Librarians," *Bulletin of the Medical Library Association*, 40:43, Jan. 1952.

55. Craig, Howard, and Felter, Jacqueline W. "Co-Operation or Chaos; A Summary of the Problems Confronting the Medical Libraries of Greater New York," *Bulletin of the Medical Library Association*, 46:381, July 1958.

56. "Co-Operative Control of Library Resources: A Symposium," *Bulletin of the Medical Library Association*, 47:369-86, Oct. 1959; and "Regional Plans for Medical Library Service," *Bulletin of the Medical Library Association*, 52:497-523, July 1964.

57. Morse, Kenneth T. "International Conference on Scientific Information: A Brief Report," *Bulletin of the Medical Library Association*, 47:170-71, April 1959.

58. Evans, Luther H. "Bibliography by Cooperation," *Bulletin of the Medical Library Association*, 37:197-212, July 1949.

59. Thomson, David. "A Highly Organized Medical Library," *Journal of Documentation*, 2:59, Sept. 1946.

60. Fleming, Thomas P., et al. "A Continuous Bibliographic Service in University Libraries," *College & Research Libraries*, 8:328, July 1947.

61. Larkey, Sanford V. "The Army Medical Library Research Project at the Welch Medical Library," *Bulletin of the Medical Library Association*, 37:124, April 1949.

62. "The National Library of Medicine Index Mechanization Project, July 1, 1958-June 30, 1960," *Bulletin of the Medical Library Association*, 49(2):1-96, Jan. 1961.

63. *The MEDLARS Story at the National Library of Medicine*. U.S. Department of Health, Education and Welfare, Public Health Service, 1963.

64. Taine, Seymour I. "The Medical Literature Analysis and Retrieval System," *Bulletin of the Medical Library Association*, 51:157-67, April 1963.

ADDITIONAL REFERENCES

Adams, Scott. "The Office of Science Information Services, National Science Foundation," *Bulletin of the Medical Library Association*, 47:387-92, Oct. 1959.

Bolef, Doris. "An Orientation Program for Student Nurses," *Bulletin of the Medical Library Association*, 38:1-8, Jan. 1950.

Brodman, Estelle, et al. "The National Medical Library; The Survey and Ten Years' Progress," *Bulletin of the Medical Library Association*, 43:439-46, Oct. 1954.

Brown, Alberta L. "The Relation of the Librarian to Management, to the Patron and to the Library Staff," *Bulletin of the Medical Library Association*, 46:82-90, Jan. 1958.

_____. "Survey of Translation Activity in the United States and Canada," *Special Libraries*, 53:34-36, Jan. 1962.

Brown, Amy F. "The Importance of Hospital and Nursing School Libraries to the Nursing Profession," *Bulletin of the Medical Library Association*, 47:258-63, July 1959.

Cavanagh, G.S.T. "Medical Travel Books," *Bulletin of the Medical Library Association*, 47:315-18, July 1959.

User and User Services

- Clopine, John J. "Translation Programs," *Bulletin of the Medical Library Association*, 50:188-95, April 1962.
- Coffyn, Eleanor N. "Medicine's 'Information Please,'" *Bulletin of the Medical Library Association*, 36:184-89, July 1948.
- Crandall, Ella J. "The Hospital Medical Library," *Bulletin of the Medical Library Association*, 43:184-87, April 1955.
- Darling, Louise. "Darwin and Evolution," *Bulletin of the Medical Library Association*, 47:510-14, Oct. 1959.
- Davis, Lora-Frances. "Helping the Smaller Library," *Bulletin of the Medical Library Association*, 52:202-06, Jan. 1964.
- _____. "The Simple Exhibit," *Bulletin of the Medical Library Association*, 48:91-95, Jan. 1960.
- Esterquest, Ralph T. "Medical Library Service in the Hospital," *Bulletin of the Medical Library Association*, 52:253-61, Jan. 1964.
- Flandorf, Vera. "A Library for Students and Staff," *Nursing Outlook*, 9:288-89, May 1961.
- Foregger, Richard. "What the Physician Expects of the Librarian," *Bulletin of the Medical Library Association*, 40:283-87, July 1952.
- Foulke, Jean E. "The Young Student and the Scientific Library," *Bulletin of the Medical Library Association*, 51:489-98, Oct. 1963.
- Fraser, M. Doreen. "Canadian Medical School Libraries and Their Collections; A Brief Review," *Bulletin of the Medical Library Association*, 48:149-61, April 1960.
- Gilman, Henry. "What the Scientist Expects of the Librarian," *College & Research Libraries*, 8:329-32, July 1947.
- Gorlin, Robert J. "Dental Research in a Medical Center Library," *Bulletin of the Medical Library Association*, 46:503-05, Oct. 1958.
- Gruen, Sonia L. "Establishing a New Medical School Library," *Bulletin of the Medical Library Association*, 52:684-91, Oct. 1964.
- Hallam, Bertha B. "Finding Your Way Around a Library," *American Journal of Nursing*, 61:108-09, Oct. 1961.
- Hawkins, Miriam, and Parker, Shiela M. "Scientific Translations: Sources and Services," *Bulletin of the Medical Library Association*, 48:199-202, April 1960.
- Heatherman, Mary E. "How the Medical School Library Can Better Serve the Graduate Student," *Bulletin of the Medical Library Association*, 40:13-15, Jan. 1952.
- "The Hospital User," *Bulletin of the Medical Library Association*, 44:57-64, Jan. 1956.
- Ingersoll, C. F. "The Responsibility of the Library to the Faculty," *Bulletin of the Medical Library Association*, 40:16-20, Jan. 1952.
- Johnson, Barbara C. "The Context of Reference Work in the Hospital Professional Library," *Special Libraries*, 53:141-44, March 1962.
- Kennedy, Catherine E. "Medical Translation Service and Index," *Bulletin of the Medical Library Association*, 41:132-37, April 1953.
- Keys, Thomas E. "Research Libraries in Medicine," *Bulletin of the Medical Library Association*, 43:207-11, April 1955.
- Klumpp, Theodore G. "What Scientific Libraries Can Do for Industry" *Bulletin of the Medical Library Association*, 37:35-45, Jan. 1949.
- Lewis, Robert F. "From the Mountains to the Moon: Some Historical Aspects

MILDRED C. LANGNER

- of Survival at Great Heights," *Bulletin of the Medical Library Association*, 49:212-17, April 1961.
- Long, E. Croft, and Miller, Polly G. "The Medical Library and the Medical Student," *Bulletin of the Medical Library Association*, 52:568-74, July 1964.
- McCann, Alice M. "The Value of Exhibit Material to the Professional School Library," *Bulletin of the Medical Library Association*, 34:22-25, Jan. 1946.
- McClure, Cuvier D. "A Medical Student Views the Medical Library," *Bulletin of the Medical Library Association*, 40:10-12, Jan. 1952.
- MacWatt, J. Alan. "The Pharmacy Library," *Bulletin of the Medical Library Association*, 43:203-06, April 1955.
- Martin, Jess A., et al. "Twenty-five Years of Translating Service at NIH," *Bulletin of the Medical Library Association*, 53:422-25, July 1965.
- Mettler, Frederick A. "What Does a Research Man Want of a Medical Library?" *Bulletin of the Medical Library Association*, 36:28-33, Jan. 1948.
- Meyers, Lawrence. "The Clinician and the Medical Library," *Bulletin of the Medical Library Association*, 36:210-13, July 1948.
- Norris, Helen H. "Serving the Professional Public," *Bulletin of the Medical Library Association*, 34:219-20, July 1946.
- Osborne, George E. "Faculty and Student Use of the Library," *Bulletin of the Medical Library Association*, 41:405-09, Oct. 1953.
- Parker, Sheila M. "War and its Aftermath—Some Medical Aspects," *Bulletin of the Medical Library Association*, 49:100-01, Jan. 1961.
- Parker, Sheila M., and Purtle, Helen R. "A Guide to the Planning and Development of Exhibits for Medical Libraries," *Bulletin of the Medical Library Association*, 46:335-43, July 1958.
- Pizer, Irwin. "The Doctor's Bag: Past and Present," *Bulletin of the Medical Library Association*, 51:250-55, April 1963.
- Pulaski, Edwin J. "The User Looks at the Library," *Bulletin of the Medical Library Association*, 42:421-25, Oct. 1954.
- Rogers, Frank B. "The Army Medical Library—Problems, Plans and Possibilities," *Bulletin of the Medical Library Association*, 38:145-51, April 1950.
- Shaver, Mary C. "The Library's Contribution to Nursing Education," *The Canadian Nurse*, 57:553-55, June 1961.
- Southern, Walter A. "Information Service at Abbott Laboratories," *Illinois Libraries*, 45:493-98, Nov. 1963.
- Strieby, Irene M. "Reference Files in a Pharmaceutical Library," *Bulletin of the Medical Library Association*, 35:107-15, April 1947.
- Swift, Helen P. "Trends in Library Service," *ALA Bulletin*, 55:338-40, April 1961.
- Walker, Mabel. "Research Problems in Dentistry: The Role of the Dental Library in Dental Research," *Journal of Dental Education*, 27:74-80, March 1963.
- Wiles, Juanita Z. "The Case for a Hospital Library," *ALA Bulletin*, 55:341-44, April 1961.
- Yast, Helen T. "The Library's Integral Services," *Hospital Progress*, 43:142-46, Sept. 1962.
- Zachert, Martha Jane K. "The Use of Reference Service Records in Pharmacy Library Development," *Bulletin of the Medical Library Association*, 48:331-38, July 1960.