



# The Regional Medical Library Program

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IN THE DECADE since the passage of the Medical Library Assistance Act of 1965 (MLAA), the community of medical libraries has forged ahead of others in the expansion of information handling and access. The comprehensive nature of this growth is demonstrated by a worldwide approach to bibliographic control, the establishment of networks and cooperatives, the coordination of effort, and the utilization of modern technology. To date, the Regional Medical Library Program (RMLP) network has blanketed the nation with a variety of library services and has stimulated the implementation of abstract concepts such as the sharing and allocation of resources. Much of the strength of the RMLP is derived from the fact that it is based on specific federal legislation, and from its organization with a national library at the apex.

The MLAA has authorized the following programs:

1. Construction of facilities
2. Training in medical library sciences
3. Special scientific projects
4. Research and development in medical library science and related fields
5. Improvement and expansion of the basic resources of medical libraries
6. Establishment of regional medical libraries
7. Biomedical publications, and
8. Regional branches of the National Library of Medicine [NLM].<sup>1</sup>

This discussion will focus on network activities stemming from three of these programs—items five, six and eight above. Concerning item eight, however, NLM director Martin Cummings has pointed out: “The

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NLM has acted to implement all of these programs with the exception of establishing our own Regional Branches. We decided, instead, to try to improve existing resources rather than to create competitive federal entities."<sup>2</sup>

The development of the MEDLARS/MEDLINE data base and access to it will not be discussed here. Although this is an important network activity which provides bibliographic access in a decentralized mode to the world's medical literature, its design and usage has been fully treated elsewhere.<sup>3</sup>

It should be noted that the Regional Medical Library Program activities should not be confused with those of the Regional Medical Program (RMP). The latter program was designed to assist the nation's health personnel in making available the best possible patient care for heart disease, cancer, stroke and related diseases. The RMP has emphasized continuing education of physicians and allied health professional personnel, and the need to encourage rapid and effective transmission of vital health information to these groups. RMP legislation includes no library or specific program authorizations, but it is inevitable that some RMP funds would support various network activities of the RMLP; hence the confusion in program objectives as well as in names. David Kefauver has fully described the relationship of these programs.<sup>4</sup>

#### ORGANIZATION

The RMLP network is structured as a hierarchy with NLM as its comprehensive national resource; NLM serves as a reinforcement by providing other libraries with material not in their collections, and as a national indexing and cataloging center. The regional libraries provide interlibrary loan reference and consultation services to a broad geographic area. For individual health professionals, local libraries are the closest point for library service.

There are eleven RMLs, as listed in Table 1. These libraries are counseled by regional advisory groups, made up of librarians, medical educators and professional "users," in matters of policy and development of new services. These groups usually meet twice each year, and provide a sounding board for new ideas and feedback concerning RML progress.

#### DOCUMENT DELIVERY

The basic fundable activity undergirding all RMLP actions has been

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TABLE 1  
REGIONAL MEDICAL LIBRARIES

	States served	Operational
New England RML The Francis A. Countway Library of Medicine, Boston	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	10-1-67
New York & Northern New Jersey RML New York Academy of Medicine	Northern New Jersey, New York	2-16-70
Mid-Eastern RML College of Physicians of Philadelphia	Pennsylvania, Delaware, Southern New Jersey	7-1-68
Mid-Atlantic RML Bethesda, Md. (NLM)	Maryland, North Carolina, Virginia, Washington, D.C., West Virginia	
East Central KOM RML Wayne State University, Detroit	Kentucky, Michigan, Ohio	4-1-69
Southeastern RML A.W. Calhoun Med. Library Emory University, Atlanta	Alabama, Florida, Georgia, Mississippi, Puerto Rico, South Carolina, Tennessee	1-2-70
Midwest RML The John Crerar Library, Chicago	Illinois, Indiana, Iowa, Minnesota, North Dakota, Wisconsin	11-18-68
Midcontinental RML University of Nebraska Medical Center, Omaha	Colorado, Kansas, Missouri, Nebraska, South Dakota, Utah, Wyoming	7-1-70
South Central RML University of Texas Health Science Center at Dallas	Arkansas, Louisiana, Texas, New Mexico, Oklahoma	2-1-70
Pacific Northwest Regional Health Sciences Library University of Washington Seattle	Alaska, Idaho, Montana, Oregon, Washington	10-1-68
Pacific Southwest RML Center for Health Science University of California Los Angeles	Arizona, California, Hawaii, Nevada	9-1-69

interlibrary loan (ILL) or, more accurately, the delivery of documents in photocopy. Only a small portion of material requested in the field of medicine is in book form; thus, the major part of ILL traffic is in the form of journal photocopy. This activity represents a network approach to physical access—a key effort in ensuring that health

scientists in remote areas have access to medical literature equal to that of personnel working at or near a graduate medical center.

Table 2 shows the pattern of document delivery since the last region was organized in 1970. It will be noted that virtually all regions report clearing 100 percent of the documents within four calendar days. This statistic is misleading, however, since it does not indicate how long it took for the requester to receive the material.

Most requests received at the resource libraries come by mail; materials are returned in the same way, and are thereby subject to the vagaries of the postal service. The receipt and distribution as well as the gathering of mail at a university medical school, or in any medical complex, may therefore be uncertain. To illustrate the point, a user may submit a request at a local hospital on Monday; the request would be processed, mailed and received in a resource library by Thursday. It may then be filled within twenty-four hours, only to have it miss the Friday postal pick-up. Thus, the needed material could not enter the U.S. mail process before Monday, and under the best of conditions it would not be received before the following Wednesday or Thursday. A reliable study needs to be done on the elapsed time the average user must wait this delivery method. The resource libraries use TWX to communicate requests so that a minimum time loss is experienced for that part of the transaction.

Several other network activities stimulate the delivery of documents. Bibliographic access is a concomitant of physical delivery: the literature has been indexed through MEDLARS/MEDLINE and has been located through union lists of serials and library catalogs. A national computerized union list, SERLINE (Serials On-line), has now been developed. Beginning attempts have been made to organize serial literature in a logical framework for optimum availability of the resource on at least a regional scale. These efforts have aided the delivery while stimulating the demand for hands-on medical literature. Predictably, this demand has exceeded the funds available for its support.

On a national basis, approximately \$1,431,000 were available in 1973-74 for document delivery reimbursement. Reimbursable requests totaled \$579,108, excluding the Mid-Atlantic Region and NLM. At an average of \$3 per request—which is below average for all ten regions—more than \$1.7 million would be required. As the NLM staff has often stated, it was never the intention of the RMLP to fund all of the document delivery traffic in the nation. A series of definitions has been legislated or mandated in an effort to reduce the number of

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TABLE 2  
INDIVIDUAL RML-FUNDED ILL ACTIVITY  
SUMMARY OF FISCAL YEARS 1972 AND 1973

	Regional Medical Library											
	NLM	New England	New York	Mid-Eastern	Mid-Atlantic	East Central	South-eastern	Mid-west	Mid-continental	South Central	Pacific Northwest	Pacific Southwest
TOTAL REQUESTS RECEIVED												
FY 72	98,471	47,661	73,395	47,096	57,238	79,029	43,187	22,113	24,053	32,559	29,851	51,905
FY 73	102,589	44,323	83,033	49,828	62,658	67,396	55,362	32,220	31,270	48,992	36,133	62,140
TOTAL REQUESTS ACCEPTED												
FY 72	85,898	46,113	70,165	46,006	54,253	NA	42,217	22,019	23,846	32,510	29,606	51,225
FY 73	94,137	42,607	80,497	49,104	58,882	66,941	52,039	31,345	33,740	48,872	35,305	61,523
TOTAL REQUESTS FILLED												
FY 72	74,583	38,606	54,116	38,101	45,579	46,966	31,187	14,654	20,431	27,491	25,979	39,662
FY 73	78,462	34,556	63,260	40,020	45,928	52,428	43,296	19,318	28,043	40,015	30,189	46,879
% FILLED WITHIN 3 CALENDAR DAYS												
FY 72	84	94	97	99.5	86	NA	95	84.5	93	98	65	97
FY 73	77	85	98.7	98.4	80	95.9	88	91.3	87.3	97.4	75.3	94

Data is generalized and not strictly comparable due to different reporting cycles, etc., but does show trends. Gratitude is expressed to NLM for sharing data.

loans considered eligible for reimbursement. The first restrictive rule is that the program was designed to supplement, not supplant, existing loan arrangements (the language of the original MLAA). Thus, all loans which fall under pre-existing network or consortia agreements should not be considered refundable under RMLP grants or contracts. Since medical libraries have always worked closely together, this definition exempts a great deal of business from the reimbursable category.

In order to preclude a small but aggressive number of institutions from receiving the major portion of refundable documents, most regions have instituted limits on the number of "free" ILLs each network participant on the next lower level will receive. Although there is considerable variance among the regions, thirty documents per month is a commonly used figure. Network participants can make more requests but they are required to pay an equitable cost for those delivered. In some cases, the larger library may elect to absorb the costs of delivering documents to those over their quota, but this is unusual. Maximum limits of thirty pages per request are normal; the user is required to pay for pages exceeding this amount.

Another definition designed to reduce the quantity of documents considered reimbursable is the net landing concept—a concept that was promulgated by the NLM staff. In effect, each lending institution must reduce its reimbursable requests by the number of items it borrows. This policy deters some libraries from contracting to provide service, since only a library with a rather large collection can maintain a favorable balance. Network activity is based on a select number of strong libraries rather than diffused among libraries which could not fill 75-80 percent of their requests.

One of the hardest definitions to interpret is that of service to affiliated or local institutions. The purpose behind the MLAA was to promote equal access to materials for users who are remote from the graduate centers or urban areas. If this view is accepted, it hardly seems fair to support document delivery to health scientists who have immediate access to a contracting library. In order to equate this service, participating libraries have adopted the rule that documents delivered to campus affiliates or within city limits of the contracting library will not be considered for reimbursement.

In view of the extension of many corporate limits, some suburban hospitals may actually be closer to a medical library than those within city boundaries. When requests come from institutions that are eight, twenty or more miles from a medical library, yet still within the city limits, there is a tendency to regard the institutions as

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geographically disadvantaged. Teaching hospitals, or those otherwise affiliated, may be quite removed, and the "campus" definition of service may be far ranging. These definitions, or other service limits defined by a radius, have been established by contracting libraries on an ad hoc basis and are fairly effective in making the RMLP a true outreach program. Many services under this definition would fall under the "previously existing" category or would be charged as the providing library deems appropriate.

A list of common or supposedly "most available" medical journals has been developed for each region. Some regions have two lists—one of 20 to 30 journals that are not provided to any institution, and an expanded list of 50 to 100 journals that are not delivered to larger institutions. These restrictions have several purposes: (1) local institutions are encouraged to build a core collection to meet their minimum information demands; (2) the network is not loaded with requests for what should be readily available, and reimbursable loans can be reserved for the more esoteric or expensive research materials; and (3) these lists have encouraged the development of local consortia which promote self-sufficiency on a subregional level.

As local collections become stronger and demands on network funds continue to exceed the supply, there is a tendency to increase the list of prescribed journals. This concept could be projected ad infinitum, but since a relatively small number of journals in medicine are heavily used, a practical limit is soon attained. Again, under this restriction local libraries can receive material on the restricted list by paying the costs involved. In special situations—e.g., for especially small or new institutions—the contracting library may agree to furnish the materials free. If a library elects to do this, it must recognize that it is absorbing the cost and may not charge this activity to the reimbursable account.

It is unfortunate that there is no way to determine the effectiveness of each restriction. If a graph could be depicted with one line showing the total growth in reimbursable requests, and another line indicating the effect of each definition, presumably there would be a diminution of distance between each line. The expansion of service and network stimulation due to factors such as extension programs and bibliographic indexing has stimulated overall growth to such an extent that these definitions seem to have little effect. In a real sense, however, the network would be overwhelmed without efforts to broaden the base of responsibility for information delivery and to distribute the funding sources.

## UNION LISTS

Several of the decentralized regions in the RMLP have compiled union lists of serial titles. Other regions depend on the catalogs of one or more large medical research libraries. These lists have taken much of the loan burden from NLM. The network management staff at NLM has not been supportive of union list efforts, especially since the development of the SERLINE data base. This data base, accessed through the MEDLINE system, was compiled from tapes submitted by each RML and indicates by region the location of "substantial" runs of each journal. Neither generalized nor exact holdings are given, and this omission has caused some concern among users. The network staff maintains that if a library has a substantial run, the chance of it having any given issue on the shelf at a specific time is as great as it is for those libraries whose exact holdings are known. This is probably true, for even in libraries where journals do not circulate, some percentage of materials will be off the shelf, at the bindery, lost, or otherwise unavailable when needed. The cost of maintaining a more precise list, NLM claims, does not justify the benefits. Certainly, any such printed list would need constant updating. These factors are of small comfort to interlibrary loan librarians, who feel they are merely fishing when they send a request to a library for which only a title listing is given.

Users experience other problems when depending on machine access. A printed book can be distributed widely to all levels of libraries participating in the network. The small library can usually afford to purchase a union list and can then direct requests to the most promising location. Data base access points are relatively scarce, and those that exist must serve as switching or referral centers for other requesting libraries. Although the cost of accessing the MEDLINE and SERLINE data bases is modest in comparison to other such services, continual access for journal locations would be neither practical nor cost effective. Requests to be processed on SERLINE may be batched when the terminal is in use, computer lines are busy, or the equipment is inoperative. However, batching adds another step and delay in the process when compared with the use of a printed guide. Finally, any attempt at rationalizing serials on a regional basis is virtually impossible without a full union list. Decisions by library personnel to subscribe to a title can only be made with full information, including length or completeness of run. The relocation of back issues to consolidate runs and simplify storage problems and record keeping would involve an inventory check for each title under consideration at each participating library.

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These are some of the advantages and disadvantages of union lists; one cannot argue convincingly against the fact that there are several functional factors in operation that will probably cause the demise of regional union lists. First, although SERLINE will not be available in every small library, the present number of 200 terminal nodes probably will double. The formation of local hospital consortia with central access to the data bases may be a nationwide compromise between access at every health science library and access at only the large graduate or research centers. Second, as consortia are formed, local union list production seems to have high priority. By sharing access to readily available titles, the loan burden is removed from the network. Consortia of hospital libraries with local union lists and access to SERLINE at a central location will accommodate demands on the nation's medical literature.

Finally, the sheer cost of assembly and production of a union list is becoming too great. Many initial efforts were funded by outside sources; without this aid, participating medical libraries find it difficult to justify this expenditure. In Region IX (South Central), for example, computer costs were initially donated by a participating institution; these chargees would now have to be passed on and would strangle any effort to produce another edition.

#### **MONOGRAPHIC UNION LISTS**

NLM has never supported the concept of union lists for books. It was felt that a request for monographic material not available in the local library should be transferred to NLM immediately as the speediest and most cost-effective procedure. Some regional libraries have taken the network view that, given a local source, the book could be obtained more quickly and at less cost from a library in the area. The union lists have taken the traditional form of a main entry card indicating the location of each library having the title. In Region IX, a file has been microfilmed twice and distributed to the libraries which submitted holdings. Other copies were made to sell, although there has been little demand. The file has been maintained in Region IX through contributions by the RML, and more recently by a grant from the RMP in Arkansas. The latter grant will enable another microfilm production. Region VII, the Midwest Medical Library Network, has had a research grant from NLM to maintain and test the effectiveness and cost benefit of a union list of monographs. Several working papers have appeared, and the final report will be issued in 1975. The development of NLM's participation in national data bases such as the

Ohio College Library Center (OCLC) will, it appears, soon eliminate the need for regional union lists. Although access to the data base via terminal will not be universal, sufficient points of entry should exist to ensure that both location and "switching" will be satisfied.

#### PLANNING

To an outside observer, the RMLP might appear to be the result of a well-planned process with a scheduled step-by-step implementation. This view would not be shared by the participants, for the planning of network activity has probably been the weakest segment of the RMLP. Surprisingly, the network has succeeded despite this weakness, being largely the result of trial and error in the early days. Several major changes in the program attest to the irregular progress in attaining successful plateaus in network expansion.

The expansion of the MEDLARS/MEDLINE system was delayed a year or more due to a disastrous contract with a commercial firm which could not perform the technical work required to amplify the computer capacity and enlarge the user base. The shift of the funding mechanism from grants to contracts was the cause of considerable confusion in the RMLs. A concomitant of the change in funding procedures was the requirement that key personnel in the RML staff find "hard" money, i.e., institutional support, for part, and in some cases virtually all, of their salaries. This situation was demoralizing, to say the least.

One of the saddest events was the parallel development by two federal agencies—the Library of Congress and the NLM—of machine-readable bibliographic data bases in non-compatible terms. This took place while representatives of both institutions were meeting regularly in Federal Library Committee sessions. NLM is presently reformatting the CATLINE data base in MARC format so that post-1965 records can be accessed via the OCLC system.

Another problem has been diverse opinions regarding centralization or decentralization of RML services. Support for centralized service may be traced to the 1965 MLAA statement which authorized regional branches of the NLM. In a centralized RML national network, NLM would deal directly with only ten to fifteen libraries across the nation, and funding support would be used to develop collections and provide services from those institutions. In a decentralized pattern, especially in a region where one library is not patently stronger than the others, funding and service opportunities are distributed to each participant, and the strength of the network is

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judged by reviewing the composite resources and services of the participants. A mixture of both kinds of organizations has now developed in the form of a national network pattern which satisfies the needs of various regions. Discussions of these patterns have been presented by Oppenheimer<sup>5</sup> and Hetzner.<sup>6</sup>

These uncorrelated or independent efforts consumed the limited resources available, as well as considerable time and effort. One cannot say what progress was made; perhaps the problems described in the oversimplified characterizations above had to take place as evolutionary steps to the present program of operation. Had the medical library community been more involved in the earlier planning stages, some of the problems may have been avoided, the issues would have been better understood, and any failures shared by that larger community.

This survey of activity points to one over-arching problem—the lack of a clearly stated national plan which has goals and defines the specific objectives of the RMLP. A guideline such as the one now being developed by the National Commission on Libraries and Information Science (NCLIS), imperfect as it may be, would provide a statement on the systematic sharing of resources to improve service with efficient utilization of available resources. Such a guideline would assist the various regions in carrying out the charge given them by NLM—that of developing their own regional plans. There was no fixed structure in which all RMLs had to fit, which is in itself a credit to the federal system of representative government. Rather than being subject to a rigid unchanging pattern, the RML formation was allowed to develop according to the political, technological, fiscal, bibliographical and manpower strengths identified in each region as the network formation took place. This is not to say that a general codification of national goals sought by RML formation would not have alleviated some groping and anxiety.

In 1973-74, the NLM staff began forming small advisory or task force committees from the RML director's group. These committees are charged with planning in specific areas such as cooperative acquisitions and cataloging, resource sharing, serials rationalization, cooperative storage, continuing education and the extension services, network interfacing, document delivery, MEDLINE coordination, reference services, and AV/CAI networks. The formation of these committees has greatly strengthened the planning process and will help to avoid many communication problems and other frustrations that the participants experienced when decisions concerning network

developments were made in a vacuum. The task force organization also has been used quite successfully on the subregional level to deal with problems beyond the scope of the RML.

#### RESEARCH

Research on library networking is a much needed element, and can be supported under NLM's program. Unfortunately, few of the projects funded under the MLAA have related to network applications. A current investigation of the costs of various library services being carried out in Houston at the Texas Medical Center Library may have network implications. Another study concerning the supply of interlibrary loan requests in hard copy in lieu of photocopy from a duplicate periodical collection may have significance, especially in view of an adverse decision in the copyright suit.

The East-Central Regional Library (Region V) has issued a series of working papers, now numbering fifteen or more, on various problems and aspects of medical librarianship, management and operation, some of which deal with network management and operation. Generally, however, few research efforts have been aimed at RMLP operations.

#### COMMUNICATIONS

One important element in any library network is the unrestricted flow of information in the communication process. As described earlier, this information flow ranges from the purely technical to the highly philosophical. The TWX has become the main instrument for the rapid transmission of interlibrary loan requests and other technical messages. On-line bibliographic searching is a reality and marks a new level in library and network communication. There are predictions that on-line searching can be expanded to allow one to initiate a request from any geographical location for a desired bibliographic item.

For the purposes of this discussion, however, communication is taken in its broadest sense to include all elements. Most of the regions have developed newsletters to keep users informed of developments, procedures and policies. These newsletters range from those published irregularly to monthly issues, with the scope varying from a full treatment of network affairs to calendars of events attached to the new book list of the regional library. In addition to the newsletters, there are regular mailings to inform participating libraries and regional advisory committees of revised procedures, new policies, and statistical reports.

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Several of the regions have developed attractive brochures that outline the services of the RMLP. These are sent in response to mail inquiries and distributed at workshops and other meetings.

A major factor in the communication process has been the development of the extension or field librarian. This process has enabled the RML and the participating libraries to effectively extend the medical library network to the most remote user. The extension concept was initiated by NLM through the grant program, with grants normally given for a three-year period to enable the network library to explore all potential aspects of this type of service and become knowledgeable about its user population. Major emphasis in this part of the program was placed on: (1) consultation in the field with library supervisors, hospital administrators, directors of medical education, and chair-persons of library committees; (2) training of library personnel, primarily through workshops at various locations in the region; (3) bringing the existence of the program to the attention of potential users; and (4) gathering information about available resources.

In the later period of these grants, work was directed to the development of hospital library consortia. This development was spearheaded in Boston and was immediately replicated by other medical units throughout the country.

Since the original grants for extension services have expired, it has been up to the participating libraries to continue support. There was a great deal of criticism concerning the cost-effectiveness of the extension grant program. It is true that results were intangible and that extension personnel were frequently frustrated by the lack of a base on which to build, and even by a lack of expressed interest in library services. Travel monies were not sufficient to support the full potential of the program. Grants did give the libraries an opportunity to inventory resources, inform the medical community of the program, and identify those nodes of strength that were potentially active contributors to the network. A definite benefit was the identification of possible hospital consortia and the recognition of a potential headquarters facility for each.

Since the grants have expired, many libraries have continued the extension programs on a part-time or on-demand basis. The preliminary period was used for intensive exploration, while extension librarians now respond to requests and wherever it appears that time invested will result in expected program development, e.g., workshops, grant proposals, and the formation of consortia. Rather

than have an extension librarian at each major network node, a regional extension service which serves as a back-up for subregional efforts may be utilized.

The lack of travel funds will be a major deterrent to continued extension work. Travel funds for any library are usually limited, and would be so even if medical school administrators viewed their commitment to community service as broad geographically as those established in the RMLP. Other funding sources and even prorated contributions by participants may maintain some extension work beyond what the major medical libraries are willing and able to support.

#### RESOURCE SHARING

Probably the most sophisticated of network activities would be resource development, shared acquisitions, and cooperative purchasing. The sharing of acquisitions suggests the pooling of funds for the joint purchase of a resource by two or more libraries. This purchase would probably be an expensive reference set, an extensive journal file, or film. This cooperative venture has not yet been undertaken by medical libraries. Distances may be too great to make effective use of materials purchased jointly, and purchasing practices may be too cumbersome to accommodate this type of cooperation. Cooperative resource development, in which each library buys an item on behalf of other libraries in a network, has great potential, however. This practice has been adopted in at least one RML region and has been described by C. Lee Jones.<sup>7</sup> Although the entire scope of library resources is a potential subject for such discussion, Jones has restricted his concern to the more expensive journal and serial titles, coining the term "serials rationalization" to describe the exercise. In brief, each major library in the region agrees to make a commitment to certain titles. Thus, if cuts have to be made, other libraries know with certainty that the title will be available at a certain library. This element is supported by the circulation of drop-and-add lists as well as lists of subscriptions to new titles. A further refinement has been the shifting of back files from library to library to fill gaps, complete runs, and eliminate the storage of partial and relatively useless incomplete files. NLM has encouraged this kind of resource allocation.

Only a small percentage of medical journal titles fulfill the greatest part of the demand. If a coordinated plan of resource development were maximized, funds would be free for other services and other forms of educational resources, such as audiovisual media, which are

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poorly presented in most medical schools. It would also allow possible support of medical education on a broader geographic base. The concept of cooperative acquisitions and use has brought to a head the conflict between publishers of medical journals and the library community. This conflict has culminated in the copyright suit brought against NLM by the Williams & Wilkins Company; it is currently being argued in the federal courts. Whatever the decision, the case will have a tremendous impact on all aspects of library networking and other cooperative endeavors.

This inventory of experiences demonstrates the vicissitudes and accomplishments in the formation of a national library network. The effective linking and development of the subunits in the larger network still need to be accomplished. Nevertheless, the foundation has been laid for the national goal of equal access to knowledge, which will lead to better health care. The Regional Medical Library Program is a primary vehicle for increasing this spread of knowledge for the improvement of the nation's medical welfare.

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