

A Health Sciences Libraries Consortium in a Rural Setting

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ABSTRACT

The coming of the East Tennessee State University College of Medicine and its effect on the health sciences institutions and practitioners in upper east Tennessee (southern Appalachia) required increased and improved information resources and arrangements for delivery and for use. The Tri-Cities Health Sciences Libraries Consortium was organized to facilitate collection development and to improve services and staff qualifications. The progress of the consortium during the initial two and one-half years of its existence is delineated. Data reflecting the dramatic growth in collection development and staff are given.

INTERINSTITUTIONAL cooperation has long existed among health sciences libraries. The most common forms include the sharing of resources, technical services, expertise, and personnel. Recently, however, there has been a widespread trend among libraries located near each other toward formalization of cooperation through contractual arrangements known as library consortia. The needs underlying the development of consortia as well as their objectives and operations have been well documented by Fink, Patrick, and others [1, 2]. Among hospital libraries, this evolution from an "autonomous, independent existence" has been attributed by Getchell [3] to (1) the increasing role of hospitals in the educational process of health practitioners; (2) the development of a unified medical library system under the auspices of the National Library of Medicine; and (3) the exploration of cooperative arrangements among the hospitals to provide needed services more efficiently.

The evaluation of interinstitutional arrangements for the provision of library services is difficult in light of the multiplicity of variables operating within each local sample. One means of resolving this problem is to gather a body of data from real life of "field situations" which will enable us to draw inferences and to make predictions. The objective of this paper is to add to the data on consortia by presenting a case study on the effects of

consortium development in a relatively resource-poor area of southern Appalachia.

THE UPPER EAST TENNESSEE COMMUNITY

Upper east Tennessee is located in rural southern Appalachia, an area of some 500 square miles, bounded by Virginia on the north and North Carolina on the east (Fig. 1). The population is mainly descended from Scotch-Irish settlers who came here during the eighteenth century. They are described by Coles [4] as isolated, disadvantaged, having strong kinship ties and a subculture different in values and goals from mainstream America. The average income in Appalachia is reported to be at least 25% below that of the rest of the country [5]. In upper east Tennessee there are three urban centers—Johnson City, Bristol, and Kingsport. Their core populations range from 30,000 to 45,000. Within a radius of fifty miles there is a total population of one million.

As a measure of the quality of medical care, the physician-population ratio in east Tennessee compares unfavorably with national standards. While the national ratio is 145 physicians per 100,000 population [6], in east Tennessee it is 96.7 per 100,000.* Like hospitals and health care services, medical information sources in this area are sparsely distributed over wide spaces. Physicians who are interested in board certification, research, improved patient care, and continuing education often have to travel 100 to 200 miles to cities with adequate information facilities. This situation has led to the establishment of book and journal collections in hospitals. These collections are personally supported by the physicians. Also, the hospitals have begun to conduct more training programs for allied health personnel such as inhalation therapists and X-ray technicians, which require additional collections of information mate-

*Physician ratio provided by the staff of Appalachian Regional Council for Health Advancement/Health Systems Agency, Johnson City.

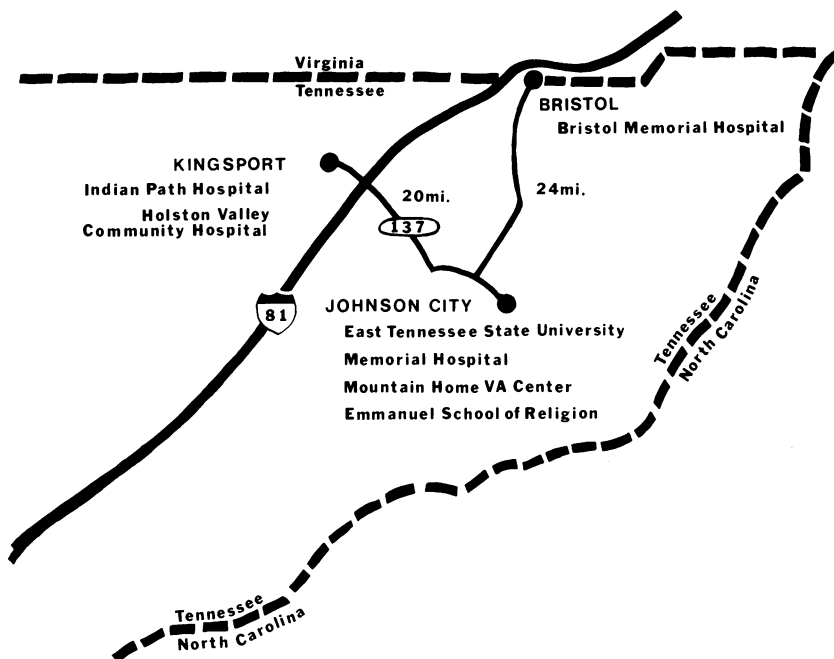


FIG. 1.—Tri-Cities Health Sciences Libraries Consortium: location of participating libraries.

rials. As a result, there are uncoordinated, independently developed, and often duplicated collections.

In summary, east Tennessee is a highly populated rural area, below national standards in per-capita income and availability of health care services. Medical information services are inadequate in quality, quantity, and accessibility. Clearly, the area is ready for development of resources and services to fill the needs of its health care personnel.

DEVELOPMENT OF THE CONSORTIUM

The major stimulus for development of the Tri-Cities Health Sciences Libraries Consortium was the newly evolving East Tennessee State University College of Medicine in Johnson City. The college brought to the area academic personnel, trained medical librarians, and resident physicians. Community hospitals were subsequently transformed into teaching hospitals requiring health sciences libraries.

As indicated in Figure 1, the consortium linked health sciences libraries in the three moderate-size towns: Johnson City, Kingsport, and Bristol. These communities had a total of six health-related libraries, all in varying states of development. In 1975, their *total* resources in the health sciences consisted of 9,836 bound volumes, 268

current subscriptions, and 152 audiovisual units. These health-related libraries were administered by a total of two professionals and eight non-professionals. Two of the community hospital libraries were unsupervised, while one had three nonprofessionals. One hospital had no library at all (Table 1).

Development of the consortium was undertaken in a series of steps:

1. *Introduction of the Concept.* The idea of cooperation was first introduced to the hospitals in a series of local meetings, some of which featured representatives from the National Library of Medicine (NLM) and the Southeastern Regional Medical Library Program. These meetings were crucial in gaining the confidence of the library staffs, which were not accustomed to dealing with the NLM. The appearance of such representatives offering assistance in this rural setting was a strong factor in acceptance.

2. *Perception of Need for Assistance.* The expanded role of the community hospitals in medical education and health care brought demands for increased information services and resources. Additionally, inflation had cut into the purchasing power of libraries, which were faced with little or no increase in budget. Technological changes in information delivery required special training which the existing staffs were not capable of applying. The perceived benefits of cooperation

HEALTH SCIENCES LIBRARIES CONSORTIUM

TABLE 1
 TRI-CITIES HEALTH SCIENCES LIBRARIES CONSORTIUM, UPPER EAST TENNESSEE
 GROWTH OF RESOURCES AND PERSONNEL, 1975-77

Institution	Resources						Full-time equivalent staff			
	Bound volumes		Current subscriptions		Audiovisuals (slides, reels, cassettes, filmstrips)		Professionals		Non-professionals†	
	1975	1977	1975	1977	1975	1977	1975	1977	1975	1977
East Tennessee State University										
College of Medicine	0	17,000	0	1,100	0	2,250	1	3	2	8.3
Bristol Memorial Hospital,										
Bristol	300*	2,148	15	60	0	0	0	1	0	0
Holston Valley Community Hospital,										
Kingsport	2,877*	2,841*	66	89	152	285	0	0	1	1.45
Memorial Hospital,										
Johnson City	800*	400*	12	80	0	99	0	1	0	0.5
Mountain Home V. A. Center,										
Mountain Home	5,859	6,103	175	200	0	1,063	1	2	3	3
Indian Path Hospital,										
Kingsport	0	132*	0	58	0	0	0	0	0	0.5
Emmanuel School of Religion,										
Johnson City	24,153	35,000	90	200	N/A	2,000	0	1	2	5

*Number of bound journal volumes not included.

†Also includes student assistants and volunteers.

thus outweighed the negative aspects of cooperation, for example, some loss of independence in decision making, use of collections by other than primary personnel, loss of privacy, and additional time and effort needed for consortium activities.

3. *Role of Resource Improvement Grant.* With the encouragement of the NLM Extramural Programs, the consortium is submitting an application for a Resource Improvement Grant. The very process of preparing the application served as a strong psychological incentive. Since the consortium was worthy of a federal agency's consideration, the attention of the hospitals became focused on the consortium.

4. *Formalization of Cooperative Arrangements.* Quite early in the consortium's history it became apparent that local differences and the desire for autonomy obviated the usual formal, cooperative arrangements. The bylaws went through three drafts and many discussions over a period of about nine months until agreement by a majority of members was reached on March 18, 1977.

THE OUTCOME OF COOPERATION, 1975-77

Two and one-half years of cooperation have brought about tangible results. Among the

changes are the following:

1. *Strengthening of Library Resources.* As indicated in Table 1, health-related institutions in the consortium, excluding the Emmanuel School of Religion, increased in total number of bound volumes by 191%, from a total of 9,836 volumes to 28,624. When the community hospitals alone are considered, the total bound volumes increased by 18%. Considering that the 1977 figures were derived after the collections had been purged of old, seldom-used materials and reflect current materials, the data are even more significant.

Current serial subscriptions, again excluding the Emmanuel School of Religion, increased by 492%, from a total of 268 subscriptions to 1,587, of which 1,150 are unique. Among the community hospitals, the total number of current subscriptions increased by 81.7%.

During the same period, the number of units of audiovisual materials (slides, reels, cassettes, filmstrips) increased from a total of 152 units to 3,697. In 1975, only one health-related institution used audiovisuals, but by 1977, four out of six had collections.

In this analysis, we have distinguished between statistics of East Tennessee State University College of Medicine Library (ETSUCML), the

five hospital libraries, and the Emmanuel School of Religion. ETSUCML would probably have grown independently of the hospitals, as its program had to support new departments of the basic sciences and of medicine. The Emmanuel School of Religion has been a member of the consortium for less than one year, and while its collection in thanatology, bioethics, and pastoral counseling is potentially useful, the majority of the collection is not health related and therefore not included in the analysis. The growth of the hospital libraries, however, depended in large part upon membership in the consortium. As indicated in Table 1, the increase in resources in two and one-half years of cooperation is considerable, in comparison with statistics of 1975. By 1977, all institutions had available to them the total resources of some 28,000 bound volumes, 1,587 current subscriptions, and 3,697 units of audio-visuals, not including the collection of the Emmanuel School of Religion.

2. *Staff Development.* There was a dramatic increase in the number of staff serving the health-related libraries. The total number of professional staff, excluding the Emmanuel School of Religion, increased from two to eight. The total clerical staff increased from 8 to 18.75 (full-time equivalents). Among the community hospitals, professional staff increased from one to four, while the clerical staff increased from 4 to 5.45 (full-time equivalents) (Table 1).

3. *Centralization of Technical Services.* An early decision was made by the ETSUCML staff to take advantage of the on-line data base of the Ohio College Library Center (OCLC). This provided the capability for cataloging the developing collections of ETSUCML and the hospital libraries, the recataloging of older materials into one compatible system, and the creation of a union catalog. PHILSOM (Periodical Holdings in the Library of the School of Medicine), a computer-based serials control system, was applied to create a union list of serials and an ongoing serials control system for the consortium. These applications of new technology would not have been possible without the expertise of the staff at ETSUCML.

4. *Collection Development.* The staff of ETSUCML surveyed the affiliated hospital libraries and identified the problem areas in collection development, in services, and in training. Core book lists of Brandon and West [7, 8] and the list of journal titles of the Southeastern Regional Medical Library Program from which interlibrary loans are not reimbursed, were used as initial

collection-development guides for the affiliated hospital libraries. Finally, books, indexes, and journals were purchased by ETSUCML for the libraries as needed, with assurance from the hospital administrators that budgets would be increased to further improve the collections and to support new journal subscriptions after the first year.

5. *Education Programs.* In addition to assistance in application of technology, the ETSUCML staff organized a continuing education program. Two workshops, on cataloging and on reference, were attended by library managers and medical records personnel from upper east Tennessee and southwest Virginia. Tailored to meet the expressed needs of the attendees, the workshop on cataloging covered descriptive and subject (MeSH) cataloging, NLM classification, and sources of cataloging information; the workshop on reference covered the standard health sciences dictionaries, handbooks, directories, indexes, the reference interview, and MEDLINE and bibliographic request forms. It is intended that continuing education will be an important function of the consortium.

DISCUSSION

In this paper we have outlined progress in organization of a health sciences libraries consortium in a rural area over a two and one-half year period. The objective is to add to a cumulation of data which, over time, will allow evaluation of the performance of this type of interinstitutional cooperation.

As indicated in the section on outcome, the experiment has yielded positive results in collection development, upgrading of staff, technical services, and continuing education programs. Unfortunately, data on services are not yet available, as a satisfactory system for recording them is only now evolving. Statistics on technical services, circulation, reference, and interlibrary loan services will be collected on a continuing basis so that a longitudinal data base will be available for the consortium.

It should be noted, however, that the extent to which the consortium has contributed to improvement in staff and collection development has been implied from statistics before consortium formation and after. While consortium formation is perhaps the most important factor, the causal relationship is, in actuality, a complex interplay of variables including needs of the health sciences community, strong leadership, availability of initiating funds, and psychological and group de-

terminants. The "Matthew effect" seems to operate; for as services improve, the ability to attract money and qualified staff increases, which in turn further improves services [9].

A final observation involves the institutional versus the individual base of library consortia. The term "catchment area" in health care delivery defines a geographic area in which any member is eligible for services [10]. In their present stage of development, library consortia tend to serve specific institutions and their primary clientele. In the future, it is hoped that the Tri-Cities Health Sciences Libraries Consortium will expand to provide direct services to all health-related personnel in upper east Tennessee.

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