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Introduction

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Articles in the medical literature and the library literature have reported on specific programs in health science libraries ranging from the automation of library routines and the training of medical library staff to direct computer/user interaction for citation retrieval. *The Handbook of the Medical Library*, 3d ed., a review by David Bishop in *Advances in Librarianship*, Vol. 2, and *Library Practice in Hospitals: A Basic Guide*, edited by Bloomquist, et al. give the state of the art of health science library organization and administration. The articles in this issue of *Library Trends* attempt to provide an overview of the total impact that changes have had on the traditional user services, including a final chapter projecting what the trends of the future will be to meet the needs of the health science user.

Since World War II, the professions responsible for the nation's health have been under the pressure of an expanding population demanding ever more sophisticated health services. New knowledge and new skills to be learned by more people in shorter time have placed great pressure on the institutions providing medical education, health care, and research knowledge. Possibly no professional groups in this country have been faced with so intensive a need to remodel their educational processes as have the health professions.

The pressures of need resulted in three major programs designed to further bibliographic control and document access in the health sciences. These three programs in the last ten years have greatly changed traditional reference and user services. The Medical Library Assistance Act, MEDLARS, and the Regional Medical Program have been enacted to better the flow of the printed medical knowledge to improve health care.

The libraries which have traditionally supplied printed information to the health professions have kept pace with the needs through new and innovative tools and service techniques. Few other groups in the

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library community have had to provide comprehensive responses to changing needs as have health science libraries.

The article by Mildred Langner is an historical review of users and user services of health sciences libraries; it outlines the traditional services rendered to users by health science libraries from 1945 to 1960.

It includes a description of the three major types of health sciences libraries and their missions, and the rationale behind the services: bibliographic control, document delivery and fact location. There is a description of the three primary orientations of user needs, historically and chronologically, related to the professional goals of clinical care, education and research. Finally, Langner compares health sciences libraries with public university library services and users.

Louise Darling presents an overview of the changes in information delivery since 1960. She includes a description of the factors that caused these changes in bibliographic control and internal activities of health sciences libraries as they relate to user services. Succeeding chapters detail the major changes. Among these activities is a description of the role of the Medical Library Assistance Act (1965 and 1970), MEDLARS and the Heart Disease, Cancer and Stroke Amendments of 1965 (enacting the regional program) in funding the changes.

Four effects these changes had on user services were: (1) bibliographic control: automation of indexing and direct computer access to bibliographic records; (2) document access: development of regional medical library network and library programs of regional medical programs; (3) improvement of existing health science libraries: updating of internal routines through automation, collection development; (4) improvement of existing health science library buildings; and (5) improvement of health science library staffs.

Estelle Brodman describes health science library users by identifying the profession and geographic location, and by the type of need the users have for health science information. This description includes the user and nonuser population before 1964; the information needs of those responsible for patient care, education and research, and, most important, a description of the change in user by profession and location.

The changing health science world and its resultant changing information needs include: (1) changes in educational methods and students, (2) changes in health care delivery, (3) changes in peer review and lay control, and (4) changes in focus of research in health sciences.

Introduction

Frank Rogers describes the first major change: the impact on users of improved access to the bibliographic record. The automated indexes and their use are detailed by type of user and are a major characteristic of information delivery in the last decade. He gives a brief description of major computer-controlled bibliographic records in the biological field, such as MEDLARS (and MEDLINE), *Science Citation Index* (and ASCA), and Chemical Abstracts Services. These are selected as having been in existence long enough for statistical data on use to be available.

Although an analysis of the user statistics is difficult, Rogers presents what is available on the type of user of these services from the published literature and from unpublished statistics available from the National Library of Medicine, Information Sciences, Inc., and *Chemical Abstracts* or the health science institution subscribing to CA Service. Rogers ends with a narrative on a typical MEDLINE search station, its users and questions.

Vernon Pings indicates the impact that improved document delivery, especially activities sponsored by the Regional Medical Library programs and the Regional Medical Program, has had in providing wider and easier access to the document and an analysis of the use of these activities. His report covers: (1) various RML networks and their activities; (2) varied RMP library programs; (3) analysis of the statistics of document use by number and user (type and location).

On user programs other than document delivery, Nancy Lorenzi and Penny Young report on reviewing the nondocument delivery systems and discuss the published reports of specific programs and a follow-up of published and unpublished user statistics. These programs include Wide Area Telephone reference and information service; audiovisual and other nonprint materials use; computer control of microfilm documents, and hospital library networks.

William and Virginia Beatty describe improvements, especially in the automation of routines, in the internal operation of libraries which resulted in better, more efficient services to health science users. They review improvements in library record-keeping, buildings, and staff. In addition they note new programs and nonprint collections.

Scott Adams describes the impact of U. S. sponsored services on users in foreign countries. He gives a description of the education programs for foreign health science library staff and of the foreign expansion of MEDLARS, SCI, etc. The papers of the Third International Cranfield Conference (July 1971) provide a broad description of the use of these tools in all areas of science.

To look forward, Harold Schoolman discusses future user services in health sciences libraries. He identifies projected programs (or missions) such as: (1) computer fact data bases (rather than merely bibliographic data bases) to be queried directly; and (2) network programs for other than document delivery, including cooperative acquisition policies, etc. relating them to the expanded role of libraries in health sciences education and health care delivery.

While each of these articles stands alone as a description of a single area of user or user service, together they form a survey or state of the art report for this aspect of the library world.