

DEBATE AND EDUCATION

Medical information portal

Peknikova M

*Academic Library, Faculty of Medicine, Comenius University, Bratislava, Slovakia. miriam.peknikova@fmed.uniba.sk***Abstract**

The classic function of the library was to build and maintain a knowledge base and to provide an access to that collective memory for the purposes of learning, teaching, caring for patients, research work or managing an organization. The formats and presentation of that knowledge base are changing rapidly, as the methods and techniques for accessing information. (Fig. 1, Ref. 1.)

Key words: library, information, internet, World Wide Web (Web), collective memory.

The Internet and the World Wide Web (the Web) represent significant advancements for the retrieval and dissemination of scientific and other literature and for the progress of education.

However, the Web is a distributed, dynamic, and rapidly growing information resource, which presents difficulties for traditional information retrieval technologies. Traditional information retrieval systems have typically been used for indexing a static collection of directly accessible documents.

So the most actual task of any library today is to new information technology, specially with formation of databases, portals, electronic libraries, to provide access to Internet information and to train the users how to use new searching methods and techniques to find a relevant information.

The classic function of the library was to build and maintain a knowledge base and to provide access to that collective memory for the purposes of learning, teaching, caring for patients, research work or managing an organization. The formats and presentation of this knowledge base are changing rapidly, as the methods and techniques for accessing information.

The aim of computer usage in libraries is controlling and distributing bibliographic and full-text database information through local networks. These networks facilitate the exchange of information from disparate sources in an electronic mode. For users, it is possible to locate information from an array of geographically distributed databases, to transfer it to local and personal workstations, to process it, to assimilate it into another form and to redistribute it as a new document, publication or database. This allows the libraries to assist in developing, testing and distributing the new mechanisms for storing and processing knowledge base.

In present, the libraries have to solve some intellectual problem in a number of crucial areas:

knowledge presentation – the expression of knowledge in symbolic form

knowledge and data acquisition – methods and techniques for building and updating knowledge bases

cognitive processing – the integration of knowledge and strategies of problem solving

human and computer interface – methods that allow humans and computers to be mutually comprehensible.

The libraries are equipped with advanced information technology at least for three major reasons:

- 1) publishers are moving in distributing books and journals from paper to electronic media, as the dominant form of information storage and retrieval,
- 2) libraries purchase new formats and organize the new forms of work such as end-user searching courses,
- 3) librarians build electronic libraries that are comprehensive, integrated, with information services supporting intellectual work.

The most important role in the sphere of medical information is provided by the National Library of Medicine in Bethesda (NLM) for more than 150 years. The library has been dedicated to orga-

Academic Library, Faculty of Medicine, Comenius University, Bratislava, Slovakia

Address for correspondence: M. Peknikova, PhD, PhD, Academic Library, Faculty of Medicine, Comenius University, Odborarske namestie 14, SK-813 72 Bratislava, Slovakia.
Phone: +421.2.59357433

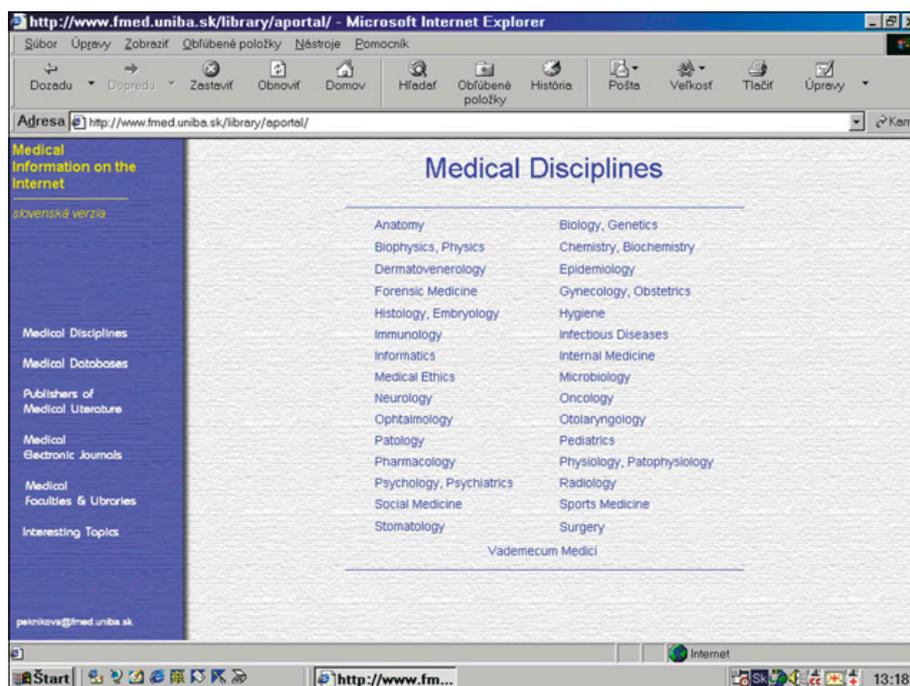


Fig. 1. Portal "Medical Information on the Internet".

nize the knowledge of medicine and to provide information to health professionals in support of clinical care and research.

The National Library of Medicine began to classify the medical literature and publishing in the Index Medicus in 1897. In the early 1960s, the expansion of the index gave rise to MEDLARS (Medical Literature Analysis and Retrieval System), the first computerized bibliographic system. In 1971, the MEDLARS evolved into a nationwide, on-line retrieval system known as MEDLINE.

In 1986, the NLM began a long-term research and development project to build the Unified Medical Language System (UMLS). The purpose of the UMLS is to improve the ability of computer programs to "understand" the biomedical meaning in user inquiries and to use this understanding to retrieve and integrate relevant information for users.

In 1997, the library announced that PubMed, new version of MEDLINE, would be available free on Web, without required registration.

At present, the users—clinicians have Web access to various biomedical databases as PubMed, Current Contents, Embase, CancerNett, CliniWeb, Cancerlit, ENTREZ, The Genomes Database, Online Mendelian Inheritance in Man – OMIM.

Information professionals have to realize the new changing setting and new opportunities in their work. The libraries represent a gateway for searching information in the new environment.

Project description

The knowledge base of the life and health sciences is expanding dramatically, as new information is added in great quantities. The expanding knowledge base of medicine and trend to-

ward specialization require new skills to educate the end-users and facilitate an immediate information access.

Clinicians are searching the information systems to improve the quality and efficiency of medical care, to cope with new health care regulations, and to become familiar with new medical information.

Medical information professionals are exploring ways to manage traditional library functions more effectively and to provide a more comprehensive portfolio of information and educational service.

Following topics challenge information professionals:

- to evaluate the knowledge-management system,
- to access the selected information, which is relevant and usable,
- to provide instruction and support so that end users can optimally use the available information resources.

Facing the new approaches, we created in our library – Academic Library of the Medical Faculty of Comenius University in Bratislava the portal "Medical Information on Internet" (<http://www.fmed.uniba.sk/library/aportal/>). The portal, accessible on our library homepage, provides new opportunities for searching the relevant medical information on the Web (Fig. 1).

This portal contains about 1500 hypertext links. Each consists of the name and the internet address – Uniform Resource Locator (URL). The portal has an universal application for the whole medical community and is easy to use.

We have included five main criteria for the portal construction:

- accuracy – all websites contain names of authors or institutions which created the site

- competence – websites with edu. gov. or org. domain were applied,
- objectivity – selected websites contain only very limited advertising,
- precision – websites contain the data when they were produced or updated,
- coverage – all websites are accessible by Internet Explorer 4.0, Netscape Navigator 4.0 or their higher versions.

The search mechanism in Medical information portal is divided according to medical disciplines, identical with the information needs of our users.

The hypertext lines are structured into following sections:

1. Medical disciplines

- include 31 basic theoretical and clinical medical disciplines divided in 167 thematic blocks.

2. Medical databases

- offer access to 15 databases.

3. Medical publishing houses

- offer selection of 60 most famous medical electronic publishing houses.

4. Medical electronic journals

- include 413 journals of publishing houses such as Oxford University Press, Springer, Mosby, and institutions such as American Heart Association, American Society of Hypertension, American Physiological Society etc.

5. Medical faculties and libraries

- on basis of the geographical division (Asia/Middle East, Australia, Europe, Canada, USA), offer access to 179 medical faculties or libraries which are an interesting source of information in the sphere of medical science.

6. Interesting Internet addresses

- offer access to the general information e.g. databases of medical conferences, holders of Nobel prizes, medical and general searching systems, which could not be included into preceding sections.

The above-mentioned portal is updated to the 2. quarter of 2004. The majority links are of permanent character, because they are provided by academic institutions.

Medical information portal creates:

- opportunity to effect information work in the field of medical information,
- support for searching the medical information on the Internet,
- new environment for the electronic education,
- the base for further development of electronic library and information system,
- instruction for user-groups from other scientific disciplines.

References

1. Braude RM, Wood SJ. On the origin of a species: evolution of health sciences librarianship. *Bull Med Libr Assoc* 1997; 85 (1): 1–10.

Received August 15, 2004.

Accepted September 2, 2004.