The Role of Medical Librarians in Creating an Electronic Medical Record of a Patient in a Modern Hospital

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Summary

Health units, and in particular hospitals, manage huge volumes of information concerning citizens, patients, medicines, biomedical equipment, scientific knowledge, the operation of facilities. To manage all this information it is necessary to develop appropriate information systems. The development of information systems has brought to the fore terms such as the Electronic Medical Record (EMR).

The Electronic Medical Record is designed to stabilize and enhance the patient's treatment, examinations, laboratory results, and to be recorded alongside other health services, providing information in a single portable and flexible file. The role of Medical Librarians in creating an Electronic Medical Record in a hospital is important. Librarians need to build different relationships with doctors in order to work together to implement the Electronic Medical Record.

In addition, hospital librarians may need to follow the instructions and developments in primary health care that take into account the implementation of the Electronic Medical Record. Existing online libraries, such as medical databases, may be involved in the implementation of the Electronic Medical Record. The hospital librarian must be strategically prepared to document and explain the need for ongoing access to online resources in the new Electronic Medical Record environment.

Keywords: Medical Librarian, Electronic Medical Record, Information Systems, Patient, Medical Care.

Introduction

Librarianship is essential to meet the diverse information needs that exist today. Both the evolution and the increase of the information / communication needs led to the development of sub-sectors and specializations. The needs are also expressed in the Health Sciences (medicine, biology, etc.), which are evolving rapidly and are supported by a dynamic technological infrastructure and research activity. Due to the need to ensure human health and ensure social well-being, Health Sciences use Information Science.

The purpose of this publication is to emphasize the important role that Medical Librarians play in creating an Electronic Medical Record of the patient, the valid and reliable medical information that they provide to medical staff, as well as other health professionals, in order for the aforementioned to promote scientific research and knowledge. At the same time these information help patients to enjoy quality medical and nursing care.

Medical Librarianship

Medical Librarianship aims to provide theoretical and scientific infrastructure in the Health Sciences, a fact that is achieved through the use of New Computer Technologies and automated information systems.

Medical Librarianship **uses** application fields as a means of gathering and organizing information, such as:

- Databases
- Digitized collections
- Integrated information systems for decision making and diagnostics
- Electronic institutional repositories
- Digital libraries

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It **involves** actions such as:
- The collection , processing, organization of medical information
- Trafficking after recovery
- Communication with organizations
- Support of users in matters of information technology etc.

It **covers** Information Needs, such as:
- Research use (clinical or basic research)
- Data feed and update of a) health professionals (doctors, nurses, etc.), b) health systems and their applications (commercial companies, insurance companies, health products industries, etc.) and c) of patients and others who use medical information for informational purposes.

THE MODERN ROLE OF A MEDICAL LIBRARIAN

- Execution of traditional librarianship work and integration of new ones
- Development of specialized services and products
- Study and evaluation of information needs of the public
- Acquisition of knowledge and skills
- Information resource management (location, selection, acquisition, analysis, processing, use)
- Provision of integrated information services
- Ensuring access and fulfillment of conditions for the convenience of the public and familiarization with technology
- Contribution to decision making
- Inter- departmental cooperation (eg bioinformatics services)
- Medical librarianship research
- Constant education (conferences, seminars)
- Establishment and participation in Medical Library Associations

THE ELECTRONIC MEDICAL RECORD

The Medical Record is the "repository" of all information related to the patient's medical history. It is therefore the basis of the diagnosis and treatment of the patient but also the basis of epidemiological research. In addition, it provides information of an administrative, financial and statistical nature, as well as quality control.

The features of the Medical Record are the following:
- Recording and maintenance of patient data
- It ensures the privacy and confidentiality of medical information
- Secure transfer and processing of medical data by other physicians wherever they are located
- Availability of all possible file formats to support and import many types of data.

CREATION OF A PATIENT'S ELECTRONIC MEDICAL RECORD

The idea behind a medical record was to create a system that would put patient information in a single file as opposed to many separate items coming from different health care departments. Basic patient information (height, weight, sex, age), diagnosed diseases, treatments, medications, treatments used, length of hospital stay, names of doctors and related health professionals and other patient care information will be included in a file. This electronic medical record could be accessed using the software that the hospital has already purchased and installed.

THE ADVANTAGES OF ELECTRONIC MEDICAL RECORDS

The advantages of the application of the Electronic Medical Record are many with the most important being:
- Easy entry, search and change of data, resulting in more accurate export of results.
- Easy inspection and processing of medical images, which ultimately means a more accurate diagnosis.
- Easier recording of observations due to the existence of coding systems.
- Easier data retrieval, both at a local dossier level and in finding data from patient dossier systems.
- Improved patient data including images, biomarkers and clinical drawings.

The benefits of the Electronic Medical Records program for **patients** are:
- Immediate service, increase of quality and care, avoiding repetitions, delays and mistakes.
- Patients are able to come in direct contact with the doctor, even if he is far enough away.
- Patients are immediately informed about public health issues, epidemics.

- Electronic Medical Record systems result in faster recovery time, less use of unnecessary medications and reduced costs for patients and hospitals alike.

PROBLEMS RELATING TO THE IMPLEMENTATION OF THE ELECTRONIC MEDICAL FILE

Hospital librarians are often the only source of access to medical information and up-to-date research. Much of the librarian's time includes researching and submitting articles, searching for URLs for relevant websites, monitoring when department staff have more requests than others, and so on. Theoretically, the Electronic Medical Record could make the librarian's task of providing information directly to the healthcare hub relatively easy.

Although the Electronic Medical Record smooths and coordinates the patient care cycle, the lack of communication between the file's software still poses problems for the hospital librarian, specifically:

- No protocol has been defined to specify the data to be entered after the patient has been examined.
- The Electronic Medical Record is impossible to eliminate or reduce the chances of human error.
- With the installation of a new computer system, it is often necessary to enter data from medical staff that makes sense to increase the working hours required to meet work needs.

THE ROLE OF THE MEDICAL LIBRARIAN IN CREATING AN ELECTRONIC MEDICAL FILE

Librarians need to build substantial relationships with doctors in order to work together to implement the Electronic Medical Record.In addition, hospital librarians may need to follow the instructions and developments in primary care that take into account the implementation of the Electronic Medical Record. Existing online libraries, such as medical databases, may be involved in the implementation of the Electronic Medical Record.

The hospital librarian must be strategically prepared to document and explain the need for ongoing access to online resources in the new Electronic Medical Record environment.

Primarily, there are five basic ways and reasons for medical librarians to participate in the application of the Electronic Medical Record. Medical librarians are or should be:

- Physical connectors between databases and health professionals
- Holders of empirical knowledge
- Neutral
- Integral parts of hospitals or health systems
- Supported by the library profession and library managers

PARTICIPATION OF THE MEDICAL LIBRARIAN FROM THE BEGINNING OF THE PROCEDURE

Once the librarian finds out that the hospital is considering implementing an electronic medical record (EMR), they should contact their implementation team.

The integration of electronic resources in the Medical Record provides another access point from which some costly internet resources can be used. The EMR implementation team will probably not be aware of the requirements and restrictions associated with existing licenses or the requirements that may be required to extend these licenses to the clinical information system.

It is certain that clinical information system vendors are willing to license content along with EMR software to their customers. Many vendors have already partnered with various publishers and electronic content providers and this will continue.

Thus, the presence of the medical librarian in the EMR implementation team will save time and money. The librarian should also be involved in presentations of various vendor products and will try to be included in any EMR training offered.

Most clinical information systems vendors, such as McKesson, Cerner, EPIC, and GE, have websites, and the librarian can learn about vendor products and collaborate before attending any EMR Implementation Team meetings.

THE ROLE OF THE MEDICAL LIBRARIAN IN THE IMPLEMENTATION OF THE ELECTRONIC MEDICAL RECORD

The Electronic Medical Record provides vital data about a patient's physical condition. The question for hospital librarians is: "Where is the additional information about the sources that the patient can look at after leaving the hospital?"

One role a hospital librarian can play is to create an informational guide that makes healthcare websites and resources reliable and available to the patient. This resource could have the added benefit of attracting patients to articles and studies for discussions with healthcare providers.

INTRODUCTION OF THE LIBRARY TO THE MEDICAL RECORD

Electronic health records have become an increasingly important issue for both clinicians and administrators. Librarians can provide important information for both doctors and patients through the online health record.

Some librarians have successfully integrated evidence-based sources into their hospital electronic medical records, providing information about care point sources and evidence for specific sets of orders.

A frequently cited resource for linking electronic medical records to patients' health is MedlinePlus Connect from the National Library of Medicine, which is recommended as an easy-to-use, accurate, up-to-date, well-written and free program.

However, injecting the library into the Electronic Medical Record development process can be difficult and demanding, and often requires the use of difficult links and complex internal policies. Although there have been many recent medical library labs and continuing education programs in electronic health records, the process is still difficult.

THE ROLE OF THE MEDICAL LIBRARIAN IN MANAGEMENT OF MEDICAL FILE DATA

Data management is an emerging field for the use of the Electronic Medical Record, in which medical librarians can participate.

The Electronic Medical Record produces a large amount of patient data that creates opportunities for librarians to participate in supervising and providing access to this data in new ways to support the clinical business.

Data management by medical librarians helps researchers understand the broad life cycle of data from start-up to management, editing, maintenance and sharing. Understanding the data life cycle and the potential role of the librarian in this life cycle is essential for the current and future uses of Electronic Medical Record data due to the challenges of having a large amount of data to manage at the moment.

THE ROLE OF THE MEDICAL LIBRARIAN IN SUPPORTING MEDICAL FILE DATA

There are three types of data support services that librarians can offer to e-science researchers: education, consulting, and infrastructure.

The training refers to the fact that the medical librarian needs to teach researchers better data management, often offering training and experience at minimal cost.

The consultation includes the librarian's direct advice to researchers on developing data management, metadata designs, and providing access, sharing, publishing, referencing, archiving, and data retention.

Finally, the infrastructure may be the responsibility of the librarian. Medical librarians, depending on their institutional framework, may be able to provide the technical infrastructure to support data management and editing.

TRAINING OF MEDICAL LIBRARIANS

Medical librarians should therefore continue to develop their core competencies to support researchers, the implementation of the Electronic Medical Record and to participate in data management.
There are, however, problems due to lack of technical skills, data management as well as editing skills.
Medical librarians need to further develop their understanding of all areas related to data management.
This can be done through an informal professional development program in the librarians' private space or, if possible, through formal courses.

There are professional bodies that offer courses to attract librarians in building these technical skills. There are many online training opportunities, some for free, for librarians looking to enhance their data management experience. Some of them are:

- DataOne training courses,
- the New England Collective Data Management course
- the MANTRA's data management training program and
- The Librarian Tool Kit.

Librarians interested in this type of work are encouraged to look for further learning opportunities in these areas. In addition, professional organizations and hospitals should also consider expanding their professional development opportunities to include data collection, various webinars, conferences and other ways for medical librarians to better develop data management skills and prepare to take on new roles related to the implementation of the use of the Patient's Electronic Medical Record.

Conclusions

Health units and especially hospitals manage huge volumes of information concerning citizens, patients, medicines, biomedical equipment, scientific knowledge, operation of facilities. To manage all this information it is necessary to develop appropriate information systems. The development of information systems has brought to the fore terms such as the Electronic Medical Record.

The Electronic Medical Records are designed to stabilize and enhance the patient's treatment, examinations, laboratory results, as well as to be recorded together with other health services, providing information in a single portable and flexible file.

The role of Medical Librarians in creating an Electronic Patient Medical Record is very important due to the valid and reliable medical information they provide to medical staff and other health professionals, in order for scientific research and knowledge to be promoted and patients to enjoy quality medical and nursing care.

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