

Chapter I

Electronic Health Records

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ABSTRACT

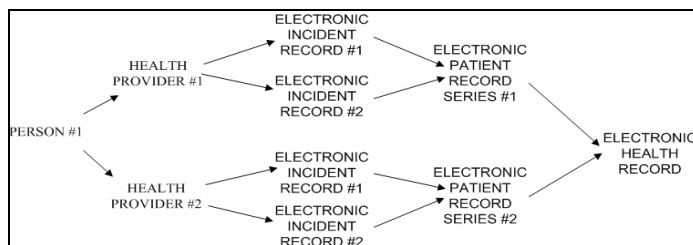
The Electronic Health Record is a means of organizing patient data making profound use of the advances in the field of information technology. Its purpose is to fulfill the various needs for information not only of patients and healthcare providers but also of other beneficiaries. The implementation of EHR systems in healthcare organizations is very complex and involves many parameters. This article is about the challenges faced by those undertaking such a task and about the potential benefits from a successful implementation.

INTRODUCTION

Advances in computer technology have the potential to solve some of the most persistent problems in healthcare. There is a consensus in healthcare that there is a need for creating information and communication systems that reduce cumbersome and outdated paperwork. Paper-based health records have been in use for centuries since they require relatively little investment to use and produce compared to more sophisticated supports, and they are familiar to users who do not have to acquire new skills or behaviors to use them properly. Despite all these, paper-based health records also

have a number of significant disadvantages. First of all, paper is a very fragile medium that requires large storage facilities. In addition, paper-based health records require large human effort to keep the files and archives organized and updated, they are available only in one place at a time, and the aggregation of data for research is difficult. Furthermore, we are moving to a model where the patient is no longer a passive recipient of the services provided by nurses, physicians, and others, but is an active partner (a consumer or a client) with the healthcare practitioners. A successful partnership requires open access to the healthcare information. The creation and implementation

Figure 1. Creation of an electronic health record



of electronic health record (EHR) systems is at the heart of addressing these needs (Daskalaki, Lazakidou, Philipp, Jacob, & Berlien, 2001; Mantas, 2002; Medical Records Institute, <http://www.medrecinst.com/index.asp>; Wang et al., 2003).

COMPONENT PARTS OF AN ELECTRONIC HEALTH RECORD

Figure 1 depicts an oversimplified view of how the EHR is created.

To gain a more accurate appreciation of the EHR's complexity and breadth of information, one must recognize the wide range of health information sources. Each time an individual visits a healthcare provider, data are generated. Figure 2 identifies some of the sources of data for an EHR as listed by the Institute of Medicine.

The component parts of utmost importance of an EHR are the following.

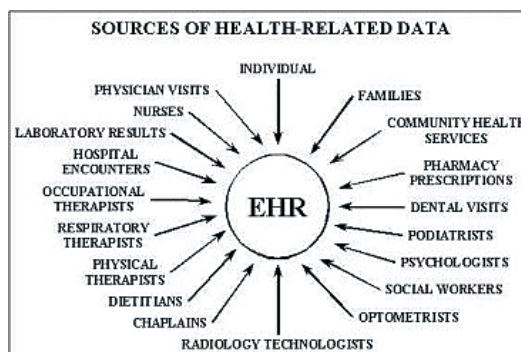
- Patient's demographic details
- Family history
- Allergies and alerts
- Medical history
- Procedures
- A summary of services provided to an individual by
 - Hospitals during admissions for treatment

- Outpatient and emergency departments
- Community and allied health
- General practice
- Dental clinics
- Diagnostic results (pathology and radiology)
- Documents such as assessments, discharge referrals, and letters
- Multidisciplinary and multiservice care plans

USE AND BENEFITS OF THE EHR

The primary purpose of the EHR is to provide a documented record of care that supports present and future care by the same or other

Figure 2. Sources of health-related data



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