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## Electronic healthcare records

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### ABSTRACT

*In this digital era, everything is being computerized or being made electronic, or being automated. Keeping this change in mind many industries and services were made online and automated while all the industries are computerized and automated at a fast pace the medical industry, and its services are lagging back in this change. Keeping this change in mind the electronic healthcare records (EHR) are made. EHR is the electronic version of patient medical records, which are more portable and efficient.*

**Keywords**— EHR Electronic Health Record, EMR Electronic Medical Record, MRS Medical Record System, Computer-based patient record (CPR), Database, Hospital, Management system, Patients, Records, Personal Health Record (PHR)

### 1. INTRODUCTION

The electronic health records (EHR) are a digital version of the patient's chart and an integrated version of his medical records. The patient's EHR is created, managed, and maintained by healthcare organizations. The EHR and EMR are only accessible by the healthcare professionals who are in the direct care of the patient and the patient has a record called personal health record (PHR) only accessible by the patient, and PHR is also a part of EHR. The EHR systems are widely being adopted by many countries and healthcare professionals around the world, and these implementations of the system in the healthcare industry bring out the immediate and accurate availability of patient health records, these EHR systems make the medical records of the patient more efficient. EHR's systems are more portable, accessible, storage, sharable and more importantly, save time. And helps the healthcare professionals to improve their care towards patients.

### 2. DIFFERENCE BETWEEN EHR AND EMR:

A. EMR — Electronic Medical Records

EMR's are the digital version of the patient charts and doctor's notes and contains medical history of the patient and his details

which would only be available to the doctor and the professional that are in direct care of the patient.

B. EHR — Electronic Healthcare Records

Whereas the EHR have everything that are in EMR and all other medical records of the patient from all the medical facilities and healthcare organizations and providers such as laboratories, clinicians and can be accessed by all the healthcare professional in the patient's care and the patient himself. The EHR system are built to be sharable and accessible to everyone who are authorized and in the care of the patient, and this is what makes the system more powerful, secure, and effective in delivering the care to the patient.

### 3. REQUIRMENTS OF THE EHR SYSTEM

The EHR system has many clinical and administrative requirements as it is the central database of information that has patient's data, documentation, prescription, clinical decision support, billing and quality, and his medical history, allergies, diagnoses, and medications, lab and test results.

#### **Patient Documentation**

The EHR system must document the complete process between the doctor and his patient, and the process of documentation should be user-friendly and time-saving as the doctor's time is valuable. Normally the documentation includes doctor's notes, patient's medical history and medical prescriptions, lab results and other medical reports.

#### **Quality and Portability**

Currently many medical records are paper records, and these records are stored in the hospital or in any other healthcare institutions where the patient is taken care of, so healthcare professionals take more time in tracking the patient's medical history and even then, some records may be left out due to human error. The EHR system helps the healthcare professional in making the records digital which are more portable compared to paper records, and the documentation process helps to keep the quality of the records, this helps save time and in making the right decision and taking care of the patient

### **Patient Confidentiality**

In healthcare the patient privacy is a very important thing and this is protected by many laws. The EHR system being digital the system must have the best security system which can withstand any cyber-attack and unauthorized access to the records

### **4. BENEFITS OF THE EHR SYSTEM**

The key feature of the EHR system is that it can be created and managed by authorized professionals and providers, and sharable over other healthcare organizations. The system is made for the usage across all healthcare providers, so, they contain information from all professionals involved in the care of the patient. These records make information available instantly and securely to the users. The institute of medicine reported that the EHR system when designed, and were used appropriately it is expected to improve the performance of healthcare professionals and reduce the operation and administrative costs, and improve patient safety.

The system will also improve productivity and allow the clinical process to make the work more efficient, improve the healthcare towards the patient by reducing the medical error through better documentation and support system can reduce the cost of healthcare overall, and digital or e-prescribing can eliminate drug errors, and the other great benefit would be the elimination of duplicate testing done on patients. The EHR system will eliminate the huge amount of paper generated in creating and sharing paper documentation of the patient and with the help of the system, the patient will have a better access to his healthcare information which helps the patient taking charge of his healthcare.

### **5. CHALLENGES OF THE EHR SYSTEM**

Every system has its own benefits, and challenges as well, even this EHR system has some of its own challenges 1. Cost of managing the system: making and managing the system costs a fortune but when implemented correctly they reduce 2. Training the healthcare professionals: training the healthcare professional in the ins, and outs of the system takes time 3. System management and security: managing the computers or other devices to run smoothly avoiding the hardware and software problems, and in turn securing the systems and software from cyber-attacks and hackers is the main challenge.

### **6. FUTURE OF THE EHR SYSTEM**

The system has a great room for the development because as the system is still in its early stages, and the technology are rapidly improving daily and implementing the future technology into this system would have a great improvement is considering the system in the market Improving Technologies such as Biometrics, RFID, Barcoding and Speech recognition when integrated into the EHR systems would be making the system more fast, easy to use and can help in improving the patients care.

### **7. CONCLUSION**

The healthcare industry is still in the early stages of a revolution, this EHR technologies are going to bring a lot of the change in the healthcare industry. This system if implemented and operated perfectly benefits the industry and bring a great improvement in patient care. In the future the EHR system will become

compulsory in all healthcare organizations and their survival depends on who has the best and efficient EHR and IT systems.

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