**Health Information Technology**

With the emergence of new Information Technology (IT), the health care system has seen a new practice of electronic health records (EHRs) emerge. In fact, about 87% of office-based physicians are using an EHR system (Yang & Hing, 2015) as they treat their patients. This paper discusses EHRs; their features, benefits, drawbacks, adoption rates and what can be done to encourage their further integration into the healthcare sector. This discussion explicates the paradigm of EHRs and why they’re important for the healthcare sector.

EHRs are an important element of current healthcare and over the past decade have redefined how information can be shared between healthcare providers and patients. It was selected to be the topic of this paper due to its popularity in ongoing medical debates and its potential to transform the healthcare system from a paper-based industry to a virtual one that delivers more efficient, faster, higher quality care to patients (Menachemi & Collum, 2011).

**Definition of EHRs**

An EHR is an electronic tool used by healthcare providers to gather and store a patient’s medical data on an electronic system. By gathering all this information into a record, healthcare providers have a more comprehensive overview of a patient’s medical data. The data elements in an EHR include the patient’s name, basic information, contact details and demographics (Menachemi & Collum, 2011). Additional medical data depends on the patient and what medical tests and procedures they’ve undergone such as radiology reports, progress results and immunizations (Menachemi & Collum, 2011).

**The Advantages of EHRs**

Previously to EHRs, the traditional health record system was to manually record a patient’s medical data on paper. Each healthcare institution had their own record of a patient resulting in one patient having multiple records containing similar information. Studies and surveys on electronic health systems focus on how the introduction of EHRs has affected patient safety and the effectiveness and efficiency of healthcare services. In the following paragraphs, the discovered benefits of EHRs are discussed.

With the emergence of EHRs, it is now possible to keep a unified repository of a patient’s medical data without duplication. This is because an EHR system notifies the healthcare provider of any redundant information or incorrectly formatted data being entered. This ensures a patient’s record is accurate, complete and streamlined which is helpful to clinicians accessing it.

In turn, a more accurate record enables the healthcare provider to give a more accurate diagnosis and prescription. This has seen a 55% reduction of medication errors (Menachemi & Collum, 2011) with pharmacists no longer having to struggle to decipher poor penmanship (Menachemi & Collum, 2011).

One of the most important advantages of EHRs is time management. Clinicians have quick access to patient records, which saves time. This more efficient use of time enables healthcare institutions to serve more patients.

EHRs enable a patient’s information to be accessible from multiple sites, which can now share the data electronically with health care providers, clinicians, and patients. This is essential in the cases of patients who may not necessarily be able to travel long distances to deliver or receive information.

EHRs reduce costs through decreased paperwork and a reduction of medical tests. The reason behind the reduced number of medical tests is that clinicians can now recall the results of a test that may not have been performed in their healthcare institution. This means there’s no need for duplication testing. This has translated statistically to a 14% decrease in the number of diagnostic tests done per visit and a 24% decrease in redundant medical tests in hospitals (Menachemi & Collum, 2011).

**The Perceived Drawbacks of EHRs**

Unfortunately, even though EHRs have revolutionized the healthcare industry, they presented a set of challenges to be dealt with. These include financial issues, lack of technical knowledge and security.

The adoption and implementation of an electronic health system into an institution is extremely expensive (Menachemi & Collum, 2011). Buying the equipment and software far outweighs the cost of buying paper and filing cabinets (Palma, 2013). There’s also the additional cost of hiring technical help to transfer all paper records to electronic form as well as maintenance costs, which are incurred throughout the lifetime of the electronic health system.

Furthermore, any staff that uses the electronic system must be trained causing a disruption in the workflow as they learn the system. An American study in 2003 (Wang, et al., 2003) that involved several clinics, showed a 20% productivity loss in the first month of the clinics that adopted an electronic health system. Unfamiliarity with the technology detracts the patient’s time as the clinician focuses on how to use the system.

A big fear held by patients is the security of their data as well as whom it is being shared with. EHRs are managed by the healthcare facility, not the patient meaning it is the responsibility of the facility to protect the data from hackers and viruses as they share it with other healthcare providers. Most healthcare institutions use the Health Insurance Portability and Accountability Act (HIPAA) of 1996 as their guideline on privacy and security (Fernández-Alemán, Carrión, Lozoya, & Ambrosio, 2013).

**Adoption of EHRs**

According to a 2015 report by the National Electronic Health Records Survey, 87% of office-based physicians use an electronic health system (Yang & Hing, 2015). The specialties that have most adopted the use of EHRs are cardiology and neurology (Yang & Hing, 2015) while the specialty that has least adopted EHRs is psychiatry (Yang & Hing, 2015).

The realization for the need of EHRs in healthcare facilities is global and the adoption of EHRs is happening across the world (Sweeny, 2017) with the encouragement of governments. However, there are still areas where the adoption and further integration of EHRs still need to be encouraged.

A major reason some healthcare providers have not adopted an EHR is due to the high cost of implantation as previously discussed. Even though the cost of systems has reduced as they have become more common (Menachemi & Collum, 2011), the cost is still too high for some healthcare facilities. This is especially seen in rural areas. Government incentives such as reduced tax and grants could also be introduced to aid healthcare facilities using EHRs.

A common issue faced with EHRs is their different formats, which can make it difficult for healthcare providers to share information. It would be easier for one standard format to be used across the scale. To enable this, better standards and rules need to be put into place. The government has come under a lot of pressure to review the federal EHR regulations (Sweeny, 2017) to push medical facilities to adhere to common EHR practices.

**Conclusion**

EHRs are an important element of healthcare in that they increase the effectiveness and efficiency of healthcare services. They enable uniform and accurate medical records to be kept by facilities and shared amongst healthcare workers to deliver higher quality healthcare. The disadvantages of EHRs include their high implementation and maintenance cost, technical training of medical staff and the security risks posed to the stored data.

The adoption of EHRs has varied across medical practices even though the government has continued to encourage it. A recommendation to solve this would be the introduction of government incentives to facilities that use EHRs and the revision of federal EHR regulations. These incentives could include financial aid seeing as the high cost of EHRs is one of the primary reasons facilities have opted to not adopt them.

As technology continues to evolve, the necessity of electronic health systems in healthcare can be seen more clearly.

**References**

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