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Health Policy Issue with the Electronic Health Record

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Citation:

Stoten, S. (June, 2009). Health Policy Issue with the Electronic Health Record. *Online Journal of Nursing Informatics (OJNI)*, 13, (2). Available at http://ojni.org/13_2/Stoten.pdf

Abstract

Electronic health records (EHRs) have great potential to improve safety, quality, and efficiency in the healthcare system. Standardized health information exchange could save billions annually in the United States by eliminating redundant laboratory tests and costs associated with ordering, paper, reporting results and storing of such documents (Walker, et.al, 2005). However, adoption of EHRs has been slow and information still remains in healthcare "silos". Reasons for slow adoption include limited money to purchase EHR software/hardware, lack of incentives to implement new programs, unclear standards, and physicians fear of being slowed down. Local creation of EHRs is progressing faster than government implementation of standards and policies and than development of regional oversight committees.





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Health Policy Issue

The United States healthcare system faces the enormous challenge of improving the quality of care and simultaneously controlling cost. Electronic health records (EHR) have been proposed as one way to help achieve this goal (Institute of Medicine, [IOM], 2001). In January 2004, President George W. Bush raised the profile of EHRs in his State of the Union address by outlining a plan to move the United States healthcare paper record system to an EHR by 2014. He stated that “by computerizing health records we can avoid dangerous medical mistakes, reduce cost, and improve care” (Bush, 2004).

After President Bush’s 2004 address, the Office of the National Coordinator for Health Information Technology (ONCHIT) was established to address the gaps in defining an EHR. The primary mission of ONCHIT is to assure users of health information technology systems that those systems “provide needed capabilities, securely manage information and protect confidentiality and work with other systems without reprogramming” (Department of Health and Human Services, 2007). To accomplish this, ONCHIT contracted the Certification Commission for Healthcare Information Technology (CCHIT) to develop specific functionality, security, and interoperability criteria to evaluate EHR systems. These criteria will provide the needed detail to refine the definition of an EHR and to promote the ability to share patient information across healthcare settings.

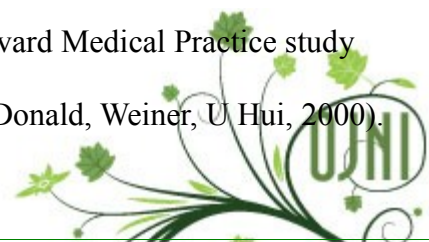




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Early systems designed to support an EHR were confined to large tertiary care centers and federal agencies such as the Veterans Administration and the National Institutes of Health. Using specified standards for data collection, EHR could be accessed across health networks, linking clinical and billing processes, reducing data replication, and increasing the availability and accessibility of information. Well-designed computerized information systems can facilitate the collection of complete and accurate data in a form that is easily accessible to enhance clinical practice, analyze patient outcomes, or manage institutional resources. The purpose of the EHR is to document patient care in a single repository as a clinical, financial, and legal record. The electronic format makes the record available as a communication device among healthcare members, regardless of their locations. Through this method data are archived and can be used for research and quality improvement (Young, 2000). The EHR is a virtual record. It does not originate from one place but is a compilation of information from a variety of integrated systems.

Much of the recent push for the development of an EHR has been related to increasing public awareness regarding the frequency of medical errors in healthcare. As clinicians we know that medication mistakes are the most common type of healthcare error and have been increasing over time, with some receiving national attention. A recent Institute of Medicine report estimated that “between 44,000 and 98,000 patients die each year due to medication errors” (Kohn, L., Corrigan, J., Donaldson, M., 2000 p. 1). Similarly, in 2000 the Harvard Medical Practice study estimated that 98,000 deaths occurred because of such errors. (McDonald, Weiner, U Hui, 2000).



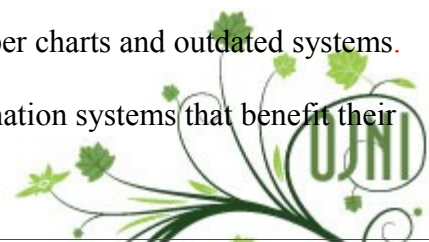


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Most errors that result in adverse drug events occur when the drug is ordered. Handwritten medication orders are often incomplete or contain illegible penmanship. Integrating an EHR with pharmacy, laboratory, and clinical information systems allows the implementation of computerized order entry, safety alerts, and medication administration systems designed to reduce errors. Not making a concerted national effort to use health information technology to its maximum capacity, which includes automatic safety features, is a failure on the part of our healthcare system. This failure has created high costs (by repeating procedures and laboratory tests), medical and medication errors, variable quality in delivery of care, administrative inefficiencies within the system, and poor coordination of efforts. In September 2008, the Honorable Pete Stark, Chairman of the Committee on Ways and Means Subcommittee on Health, introduced House Bill 6898, the Healthcare e-Information Technology Act of 2008 (Stark, 2008). This bill is intended to stimulate the development of a uniform, interoperable health information technology (HIT) system for America. The belief is that HIT is the key to improving quality, gaining efficiencies, and reducing costs the US healthcare system. Such a system would enable every hospital and doctor to input patients' information and pull up their medical record all online, making it readily available nationally.

Our medical innovation in the United States has led to the world's best care, but we have been slow to adopt EHRs, and we remain immersed in paper charts and outdated systems. Airlines and banks, for example, have advanced technology information systems that benefit their





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business as well as their consumers. Safe access to the Internet for securing and paying for an airlines ticket or, with banks, for checking personal financial information has existed for quite some time. Unlike these businesses, healthcare lags behind and operates primarily with paper-based records that require storage and retrieval. Doctors and nurses utilize advanced medical equipment that has state-of- the-art technology mixed with complex medical information communicated through an old paper system. Though it will have to be implemented by the private sector, a solid plan needs to come from the federal government including decisions about uniform standards and adoption time lines, to make the playing field equal for all private sectors.

Significance of the problem

There is no debate over whether we need a national electronic health record system in America or that it should be provided. We know that healthcare is as unique as patients themselves. Care is delivered in a variety of settings, for a variety of reasons over the course of a patient's lifetime. In addition, patients rarely receive all their care from one healthcare organization, so an EHR must be flexible and expandable to meet the needs of patients and caregivers in all these settings.

The steps we need to take regionally and across the nation are already underway locally in some physician's offices, which, in a way, create more "silos" of information. In the Indianapolis region, the Indiana Health Information Exchange (IHIE), known throughout the United States as



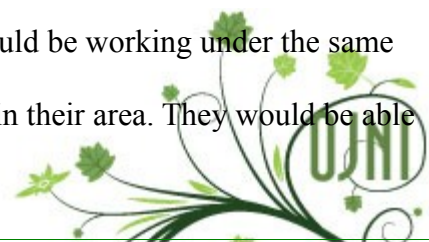


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being in the forefront of the Regional Health Information Organizations (RHIO) initiative, allows physicians to access information directly from their website or through a hospital portal. IHIE provides results such as dictation, lab, and radiology results and information is delivered to the physicians through direct connections with an EHR. However, this website only maintains reports for a period of two years for future reference or in case a report is misfiled. (IHIE, 2006). (Indiana Health Information Exchange [IHIE], 2006). This system, which requires collaboration among five major hospital systems in the Indianapolis area, enables each hospital to send data to a central repository that can be accessed by a physician to either review online or to print out for a paper chart.

Even with this move towards the use of EHR information exchange, all providers still retain their own records, operate in silos, and do not provide the aggregate data needed to improve quality of care. These IT systems may work well for an individual doctor's office or hospital system, but they do not provide connections outside of their own network (sometimes not even within their own network) and, therefore, fail to meet the need for integrating our disparate health care system. This brings to light the emergent need to develop a data base for all information or a regional health information depository (RHID) set up to the connections. With the RHID, several states would be clustered together under the direction of a regional health information specialist (RHIS) who would focus only on those states. All of the RHIS would be working under the same criteria or plan for the successful connections of the local systems in their area. They would be able





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to give guidance, obtain quick access to problem-solving, and collaborate with all hospitals, physician offices, and agencies. This would link local and national systems. Currently, systems vary greatly in data collection and terminology, and there are no guidelines or controls on who enters the data. There is no electronic connection from one to another, and a patient's medical record still remains in particular healthcare settings. As the patient moves through each provider the information is left behind. If the patient medical record is needed by another physician or provider, often it has to be printed out and sent by mail. This extends the time until it is available, and it may not reach the office in time for proper medical exchange of information since there is no electronic tie among groups that have seen the patient. These inconsistencies in EHR implementation are significant and decrease the opportunity for quick and accurate care when patients move from facility to facility.

Problem Statement

The government has not created standards for national EHR's or a method to implement them. The connection between the current information technology systems within each healthcare setting and the governmental universal health care record system has not been discussed or worked out. Other issues include the qualifications and abilities needed by those who will enter the medical information, who will monitor it for accuracy, and who will oversee compliance. At a very basic level, there is as yet no EHR system available that can provide all functions for all specialties to a degree that all clinicians would accept. Further, most healthcare organizations do





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not yet have the capacity to implement and maintain systems in all care areas. A second challenge is the lack of security standards for EHRs. Single vendors or organizations that did not have adequate systems or security when implementing the electronic medical record could create a breach in the overall system. For all organizations and settings in the near future, the government must initiate work to develop the standards required for individual systems to communicate effectively. In addition, financial and patient privacy hurdles must also be overcome to achieve an expanded EHR. Finally, patient privacy is a pivotal issue relative to how far and how easy it will be to share data across healthcare organizations. For health exchanges such as these to reach their full potential, the public must be able to trust that their privacy will be protected. Otherwise, the risk that patients may not share a full medical history, or worse yet, may not seek care, will effectively make the exchange useless. All stakeholders, including physicians, nurses, patients, insurance companies, and reimbursement agencies from the government, will be very negatively affected if the nationwide electronic medical record implementation is not efficient, lacks adequate support, and falls apart. The goal and objective of using the national EHR is to improve healthcare quality by reducing errors and improving the consistency and content of records, healthcare communications, and financial performance.





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Analysis of Alternatives

The development of nationwide sharing of healthcare information among unrelated providers will probably not come directly from the federal government but will occur at the local and state levels. The continuous development and use of the EHR will foster the rapid expansion and acceptance of electronic-based healthcare data. Continuous development will make it possible for practitioners to interact with more data and across distances in ways that improve the quality, quantity, and effectiveness of healthcare.

Regional databases to which all healthcare practitioners contribute the patient moves from one healthcare entity to another within each region have been discussed by the National Alliance for Health Information Technology (NAHIT). Their April 2008 report to the National Coordinator for Health Information Technology addressed the need for a regional health information organization (RHIO) (NAHIT, 2008). This organization would bring stakeholders within certain geographic areas and RHIO coordinators would govern the health information exchange among them. Many stakeholders would be involved in the creation of the regional network and in discussing the network architecture, trail implementation, standards, and protocols. This can be viewed as starting locally and going global once all of the structure and systems are in place. Specifically, state local healthcare systems would develop their infrastructure and then tie into the regional network.





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In such a plan, all systems would be evaluated operationally and the connections and when all tested, worked well, the next regional network would connect. All of the regional networks would be connected and the final connection would be to a national network system. This would build a solid base for successful connection to the national level. The recommendations of the NAHIT will facilitate the accessibility and exchange of health-related information. Realizing these benefits requires an underlying infrastructure that can support the use of patient-focused electronic health information that goes beyond the limitations of a specific provider, health plan, or delivery system.

The shortcomings of the foregoing regional approach are that not all organizations with a geographic identity within an RHIO may agree upon standards or special requirements established by the RHIO, and currently there is no state rule to enforce compliance. However, it is realistic to believe that eventually everyone will want to comply and utilize the system since financial incentives for implementation are clearly outlined. According to Rep. Stark, doctors and hospitals that adopt and use EHRs that meet the new standards will receive significant financial incentives from Medicare over time (Stark, 2008).

A connected healthcare environment enables access to health information across the continuum of care. If stringent compliance and regulatory reporting requirements are not created and implemented to accelerate the adoption of the EHR, this will critically affect the consumer and generate chaos within the already stressed healthcare system.





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Conclusions and recommendations

Despite these challenges, the future of EHR is exciting one with potential benefits of improving quality, reducing cost, and most important, allowing interoperability. President Bush stated in his 2004 State of the Union address that the federal government is one of the largest buyers of health care (Bush, 2004). With the continuous increase in numbers of older persons in the United States and the current federal budget difficulties the government should create incentives for health care providers to connect to a nationwide system to reduce medical cost much earlier than 2014.

Making sure that measures are designed to protect patient privacy is not solely the provider's responsibility. A watchdog approach needs to be developed to prohibit the sale of identifiable personal health information but needs a ruling in place so that the right parties can obtain authorization to use the data. Another recommendation is for the use of encryption or other methods to render patient health information undecipherable. Patients should be notified within 30 days that a breach has occurred and informed that they have a right to request an audit trail that shows any disclosure of information held in an EHR. Furthermore, the monetary penalties against a healthcare provider for violating federal privacy rules should be increased, and state attorneys general should be given authority to pursue penalties for the violation.

The federal government should establish basic requirements for information technology





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infrastructure, decide on common language, and create standards and a timetable using incentives to reach the deadlines of implementation. This will enable a universal networking system to develop, allowing each healthcare organization to be in control of the situation. National rules will increase local autonomy as local government operates within parameters set by government. There must be strong local institutions which can exert political power.

EHRs and data sharing will improve quality, reduce costs, and decrease medical errors and duplications. The improvement in quality will come about through better management of health care information. The EHR will give immediacy and accessibility to healthcare providers, which is a significant benefit for the consumer. With cooperation from the government to support the nationwide rollout of electronic records for 2014, it behooves the nursing and medical professions to become part of the regional health information organizations to help set the standards, develop policy, and assist in the electronic connection.

Being on the forefront of this new change is exciting. The effective adoption of EHR, promises to transform care delivery, improve the health of the American population, and enable individuals to more effectively manage their health and health care.





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