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# Evaluation of the steps for implementation of electronic health records for a small chiropractic practice in Northern Michigan

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**Abstract**

**Objective:** The purpose of this article is to use the steps described by Genson and Chun for implementation of electronic health records to determine the plausibility of implementation in a small private practice in northern Michigan.

**Discussion:** A step by step approach was applied as described by Genson and Chun, which included discovery, planning, procurement, implementation, and support. Several challenges and obstacles were identified.

**Conclusion:** Electronic health records will eventually be a necessity, but they may not have matured enough to easily replace paper charts or to justify the expense for a single-doctor practice at this time. Each doctor should evaluate the needs of his or her practice for implementing electronic health records and weigh benefits and drawbacks prior to considering implementation.



## Introduction

Adoption of health care information technology in the United States has lagged behind that in other businesses such as the retail, banking, and travel industries. It is difficult to determine the implementation percentages of electronic health records (EHRs), but estimates suggest that from 5% to 13% of all primary care physicians (PCPs) have fully functional information technology (IT) in their practices.[1] Lorenzi et al[2] list the benefits of EHRs as improvements in office efficiency, improved patient care, and possibly financial benefits. As improved patient care and reducing medical errors is in the forefront of all practitioner minds, why hasn't IT been embraced by the health industry on a broad scale? The primary barriers to EHR acceptance listed by priority as per Lorenzi et al[2] are costs, lack of standardization of EHRs, office staff resistance to change, initial difficulties of system use, and finally the positive benefits to society and third-party payers with minimal financial return for the physicians that pay for the EHR system. The current

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United States administration is trying to alleviate some of the financial concerns associated with EHRs by including monetary incentives to providers who implement IT in their practices by 2013 and then imposing penalties after 2015 if EHRs are not in place.[3] In addition, The Center for Information Technology Leadership report[4] states that $77.8 billion per year of the health care expenditures in the United States could be saved with widespread EHR use. When all these factors are considered, it is amazing that EHR use is still a challenge for the U.S. health care industry. The purpose of this commentary is to discuss Genson and Chun's[5] general approach to transforming to a digital health care system using the following 5 stages: discovery, planning, procurement, implementation, and support for a single-doctor chiropractic practice in Northern Michigan.

## Genson and Chun five stages of evaluation

The following is a description of the evaluation for 1 private practice in northern Michigan using the steps to implementation of EHRs as described by Genson and Chun.[5]

The discovery stage stresses analysis of the external and internal health care environment. The first external concern focused on the long-range aspects of the health care industry, which is expected to add 3.5 million jobs from 2002 to 2012, which is a 30% increase according to Genson and Chun.[5] In addition, the U.S. system will be experiencing change due to the fact that 16% of our gross domestic product continues to be spent on health care, which is an unsustainable number.[6] The second external factor evaluated in the discovery stage is the status of the IT industry as it relates to EHRs for small practices. Baron et al[7] showed the benefits at present as increased quality of care, easier office communication between doctors and staff, and an additional 30 minutes a day for physicians where they can either see patients or spend time with their families. With the implementation of the recent grants and tax incentives as per Szura,[3] there will be many changes and developments over the next 2 years in EHRs. Internally, McGregor Chiropractic must purchase new computer hardware regardless of potential EHR updates because the current billing software purchased through Genius Solutions (GS) has taxed the capabilities of the current 4-year-old system.

The second step is the planning stage where the current infrastructure was evaluated to determine if the IT investment would show a positive return. There are difficulties associated with patient files such as 2 staff members needing a file at the same time, and files misplaced or waiting to be filed or on the doctor's desk to record information. Also, there are issues with proper forms not being in the file for the patient encounter and time wasted retrieving what is necessary when it could be better spent spending face time with those seeking care. The office has broadband access, and the office staff is familiar with computer use. Unfortunately, the choices are limited for chiropractic practices in general when searching for EHRs, and GS is apparently the only vendor in Michigan that has a product specifically for the chiropractic profession. The total purchase price would be $5440.00. This includes the Writepad EHR software and two Writepad adapters. Also, custom training sessions are included that walk the doctor and staff though the steps required to maximize the use of the software. There is also 1 year of support and a weekend education session for 2 persons from the office offered at the main GS office in Warren, Michigan. The support and updates to the system would be $900.00 per year after the initial year of ownership. There are 3-, 4-, and 5-year payment options, but the practice does have the resources to pay up front and save considerable interest payments. Nonfinancial benefits from the IT upgrades would include a positive practice image and that the doctor is staying up to date with changes in technology.

The third stage, procurement, is the timeline set up between the practice and the software that was evaluated in the previous stages. New hardware will be purchased even if the new software is not purchased. The vendor states a maximum of 4 weeks to have the software and accessories installed and professional training within 2 weeks of that date. Each patient would be considered new at this stage, and the normal 10- to 15-minute appointment would be expected to be in the 30- to 60-minute range for the first few months due to additional data entry.

The fourth and longest stage is the implementation stage, and if the first 3 steps are done properly, it should be manageable as per Genson and Chun.[5] This is not to say that there will not be challenges and difficulties encountered at this point. Specifically, patients express their displeasure at filling out a form that takes on average 2 minutes. Switching this process to a computer to enter their data will take up valuable staff time over the initial period. In addition, work flow systems that have been in place for 20 years will need to be adjusted, removed, or new ones invented. Baron et al[7] had to rapidly adjust their work flow patterns during

the implementation stage and stated that it "seemed akin to redesigning an airplane in flight."

The final and fifth stage is support and is where all the hard work of the previous stages hopefully pays off. There would be no files to misplace or pull for the day's patients, and if billing required a file while the doctor is in with a patient, both parties would have access to the information required. Continued support over time is required as in a small practice there is not the dedicated staff for hardware and software difficulties. The practice has experience with GS over the past 5 years, and one can be confident that their support will continue to be timely and knowledgeable as in the past. The support stage is also where additional benefits such as tracking patients for overdue procedures can be accomplished. At present, the system for patient contact is archaic at best, and here implementation could help offset the costs of the system over time.

## Challenges and obstacles

Health care is a rapidly evolving aspect of the U.S. economy and is labor intensive due to the stringent documentation required in all aspects of patient care. Having access to patient data through EHRs will not only save time and money for providers but will also save lives when health information is easily accessible for any U.S. citizen. If a person collapses while on vacation, the emergency room personnel could access the individual's health data from any computer thus saving precious minutes when a person is unable to speak for themselves.

However, there are several obstacles that may prevent immediate implementation for small practices. For example, in several years the health care IT market will have changed and matured substantially due to health care reform and the incentives instituted by the current government administration. The interoperability of health IT at this point is minimal and changing rapidly, which may not make for a positive work flow. For this practice, the local hospital is changing its IT platform from that of one of its affiliate hospitals to that of the system model of the entity that owns the institution, and the lab has a system for reporting results, and it is unclear if it will be compatible with GS. If these systems are not able to connect with each other, the lab reports and hospital outpatient imaging reports will have to be manually entered into the EHRs, which does not save time or money. Therefore, adoption of EHRs does not seem appropriate at the time for this particular practice.

## Conclusion

Electronic health records have their place in health care and will be a necessity for health care practice in the years to come. At present, there are many rapidly changing aspects associated with their implementation. Using the 5 stages as described by Genson and Chun may help the solo private practitioner make the best choice when deciding to implement EHRs.

## Funding sources and potential conflicts of interest

The author reported no funding sources or conflicts of interest for this study.

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