Electronic Medical Records: The Future Is Now

E. Sonny Butler, PhD, FAAMA
Diplomate in Healthcare Administration
Associate Professor
College of Information Technology
Georgia Southern University
Statesboro, GA

Charles J. Lathram III, CMPE, CCP
President/CEO
Advanced Physician Solutions, Inc.
Florence, AL

ABSTRACT

Electronic Medical Records, Electronic Health Records, Computerized Patient Order Entry, E-Prescribe, however you want to refer to it, we have all heard that this is our future in healthcare. Automation has been peeking its head around the corner at us for some time now, but for the most part, it has only been adopted by the very brave. If you ask them, most of the early adopters of automated patient records, will say the did it for the financial benefits, or out of fear of up-coding, or possibly because it would give them better quality of life as providers. However, the real beneficiaries of automated patient records will be the patients themselves. Often time medical and diagnostic errors occur because complete patient information is not available at the time of patient care. Physicians are forced to provide care, emergent or non-emergent, based upon a patient's recollection or, in worst cases, a family member's memory or no information at all. An integrated Electronic Patient Health Record system could help resolve this lack of information dilemma. The Electronic Patient Health Record model explains how the integration of every department creates a synergy between each departmental system by allowing data to be captured at any location in a physicians' office or anywhere in the hospital. A physician's Electronic Patient Health Record consists of an individual's health/medical information from "birth to death." This paper discusses the use and impact of an EHR and the relation to the electronic patient health record model, which defines the electronic patient system and its components. Furthermore, this paper describes a study that determines how many physicians, group practices, and hospitals to determine the relative implementation of an electronic patient health record to improve the quality of patient care.

Keywords: Electronic Medical Record system (EMR), Electronic Health Record system (HER), medical health, information system.

Medical and diagnostic errors often occur because complete patient information is not available at the time of patient care. An integrated Electronic Patient Health Record (EPHR) system can help resolve this problem. An EPHR - "the holy grail of healthcare computerdom," (1) is a computer-based database of information about an individual's health and care throughout their lifetime, with "the record focused on and around the patient across settings of care, across disciplines, and across time"

(2). The EPHR system model integrates patient information into a single record, which allows data to be captured and accessed from any physicians' office or other care location.

Electronic Health Records (EHR), Electronic Medical Records (EMR), Electronic Prescribing (E-Rx), it is all-confusing when the majority of the medical community, whether hospital, federal or physician based, is still in the paper age. In fact, not too long ago, we all thought that three-part carbon paper was one of the greatest leaps of technology the medical world had seen in ages. We all hear that the government, in its attempt to reduce medical errors, is working on standards for automating our lives. President Bush issued an executive order in April of 2004, establishing the Office of National Health Information Technology Coordinator and envisioned the development of standards for health information technology (HIT). Congressional representatives are supporting this Administration with the discussion of health information technology initiatives being incorporated into physician payment and pay for performance related bills. What does this all mean and what will it take for automation to reach the real medical world? Well, that question is a daunting one at best. First and foremost, the medical community cannot even agree on what automation means. Definitions of electronic medical records vary from a networked database of transcribed or scanned written notes to a full-blown point of care system. The Centers for Medicare and Medicaid Services (CMS), as of yet, has not helped the situation, due to their lack of agreement as to what the definition should be and it seems that the only thing we can all agree on is that something needs to be done.

For the purposes of this discussion, we are going to focus on a full-fledged electronic medical records system, utilizing point of care documentation. There, is that confusing enough? What is point of care documentation? It is a system of automated templates that allows providers to capture medical information and document patient care encounters at the time of the event.

We all know that computers will make our lives easier, right? Hopefully, they will make us more adept at capturing medical information and reporting it in a format that is easily accessible by most of the healthcare world. In addition, it is our goal, through automation, that we reduce the number of adverse events that can be traced back to poor documentation or illegible handwriting. With that as our gold standard of achievement, we will proceed onwards.

Regardless of whether your organization is a hospital, federal healthcare facility or physician practice, the process of evaluation, selection and implementation of electronic medical records is very similar. The process begins with a commitment from the upper management, hopefully unanimous or as close as you can get to it. Without this commitment, especially in a physician practice, the process is doomed from the start. Once the commitment is expressed, the evaluation

process begins. Several years ago, when EMR was in its infancy, there were just a few companies offering any type of electronic health record. Today, however, the list of technology vendors for healthcare is vast and varied and it is easy to get bogged down in the quagmire of potential systems. It is critical, therefore, that you define your goals prior to beginning your search. What are your goals you ask? Simple:

1. To provide your physicians, facility, etc, with the tools to provide your patients with more timely care that is less likely to be prone to errors.
2. To implement a system that is as easy to customize to your current workflow as possible, for it is much easier to train a system to practice as your doctors already do than to train your doctors to practice as a computer is programmed to operate
3. To implement a system that is scaleable to your growth needs
4. To choose a vendor that will be in business for the foreseeable future
5. To choose a system that combines the business aspects of medicine along with the clinical aspects, in one product, therefore eliminating the potential for finger pointing, if something goes wrong.

Common sense, right? Well, once you have narrowed the field of vendors, and believe me the field is large; you have to consider several other factors. First and foremost, how many other practices or facilities of your specialty does the vendor have already installed? Being the first does have its distinct advantages, however, when it comes to the medical records of your patients, it may not behoove you to be the trailblazer. In addition, it would be of assistance if the vendor you choose already has templates for your specialty, so you don't have to reinvent the wheel. Whereas there is no such thing as an "out of the box" solution, it does make the process less painful if there are some preexisting templates for your specialty.

What about their support? They may have the best product demo and the most attractive functions, but if it will take your vendor two days to get to your practice if your system goes down, it may not be in your best interest to purchase their product. How are they positioned financially? As we have all seen in recent history, there has been a plethora of good, innovative EMR companies produce a first-class product, only to have it acquired by a larger company and it transformed into something that is much different than the original product. Make sure that your vendor is financially stable and is in a good position to resist market forces. In addition to these obvious questions, make sure that your vendor of choice can interface with the reference labs that you utilize, as well as the local payors, as they may have certain requirements that you have to comply with.

The next thing you have to think about is how you will customize your workflow to adept to EMR. Although the thought of implementing EMR into your facility will seem intimidating, it will actually provide you with a unique opportunity to evaluate

your processes and transform them into a more efficient way of caring for patients. A quality vendor should be able to assist you in evaluating your flow, from check in to check out, to see where you may be able to use automation to achieve gains in efficiency. At the very least, you should expect to reduce a portion of your business support staff, medical records personnel, transcriptionists, etc, or be able to transition them to new positions to take advantage of more patient centric activities and thus, differentiate yourself from your competition. Whereas you cannot expect to totally change the way your patient flow has always been, it is certain that you will notice areas that you can improve the flow, utilizing the tools that automation will provide.

All of that being said, it is critical that the vendor/product of your choice allow for the customization of their templates to your specific practice/facility. Systems that don't allow you to adapt, change or customize their templates to your specific workflow or practice needs should be avoided. It is difficult enough to implement a new way of documenting, but if your providers have to learn a new information flow, it could spell disaster.

Most quality systems will allow you to build templates specifically to the needs and desires of individual physicians. Although this creates more work on the front end, if you can reduce the learning curve of your providers and nurses, you will be ahead of the game. A very simple method of converting to electronic medical records is to begin using a standard form for your documentation. This form should be like the myriad of checklists and "boxed" forms that abound today. What it does, however, is get the nurses used to putting the same information in the same places and gets the providers to look for that information in the same places. You should then build your first templates in the EMR to resemble these forms, so it will reduce the time to learn the system. Realize that the success of your implementation is in direct correlation to the amount of time that you invest on the front end of the process.

What next? Get your nurses and support staff involved in the construction of the system. They are the ones that struggle on a daily basis to accomplish all of the tasks that are required to see patients. Ask them what would make their lives easier and incorporate those suggestions into the EMR. For example, if your practice is a surgical subspecialty and pre-certification is an issue, build templates for scheduling surgery or procedures. Your EMR should be able to pull all of the demographic information into the template automatically, thereby generating a quick and painless way for the schedulers to communicate the procedure and diagnosis to the insurance department and know whether or not the insurance requires pre-certification, all without anyone having to leave their work area. What you should find in this process is that EMR provides you with many more benefits than just increased documentation accuracy.

Finally, we have to talk about finances. EMR, EHR or any other depiction for medical records automation is not inexpensive. In addition, we have to recognize the premise that sometimes cheaper means cheaper. So how do we evaluate? In the vast world of EMR products, you can expect the financial spectrum to range from $5,000 to $40,000 per provider, based of course on what equipment you want to use. Do you want wireless devices or are you satisfied to use a computer just in your office? Do you want to scan your old records or just ask the patients all of the old questions at their next visit? These options should be discussed with your vendor and there is no right or wrong answers. The trick to finding the right EMR is finding one that can be customized to your practice or facility and can be structured around your needs.

EMR should be a cost savings to your facility in the long run. The Medical Group Management Association estimates that the average cost to a facility for each paper chart, including the materials, the labor involved in creating the chart and the time and effort in finding the chart is in the several dollars range, so multiply that by the number of patients that your facility sees in an average year. Additionally, remember that EMR should improve your documentation, and thus you're coding, as well as increase the productivity of your staff and providers. With all of this in mind, you don't necessarily have to choose the least expensive system; rather choose the system that best fits your practice/facility, knowing that the gains you will see should offset the expense in a reasonable time.

In the end, the absolute way to make implementation of EMR successful is not to give up. Implementation of EMR is an intimidating task to say the least. Many a good intention has gone array due to the pressures that EMR can have. EMR should be planned and implemented in a reasonable timeframe and expectations should be realistic, rather than over aggressive. Proper planning is essential for a successful implementation, so take your time.

The automation of medicine is coming, despite most of our reservations. The Administration, United States Congress and healthcare industry are promoting health information technology advancements across the board. While variations exist and definitions remain to be finalized, the healthcare community continues to advance towards automation every day. If we can see EMR for what its potential is and capitalize on that potential, we have nothing to fear. Properly educated, properly planned and properly implemented, EMR can be easy and productive and can allow our providers to have better tools to take care of our patients and make our practices a more efficient and cost effective facility.

In conclusion, EMR, EHR, COPE, E-Prescribing, in whatever fashion you wish to describe it, is here to stay. Whether we choose to implement it for financial reasons, patient safety concerns or because it may be regulated, it is a powerful tool for healthcare providers and institutions. There are many solutions and options, but the underlying consistency is that proper

planning and research is critical. We must know our own operations prior to selecting a software solution, so we can compliment our process, rather than be forced to redefine it.

References

1. Gaillour, F. “Rethinking the CPR: Is Perfect the Enemy of the Good?” *Health Management Technology*, v. 20, n. 4, 1999, pp. 22-5.

2. Chin, H. “Successful Implementation of a Comprehensive Computer-Based Patient Record System in Kaiser Permanente Northwest: Strategy and Experience.” *Effective Clinical Practice*, v. 1, n. 2, 1998, pp. 51-60.