EMR: Identifying Potential Solutions to Common Problems

One expert recounts his experience with EMRs and offers a potentially positive outlook on the future of their use in dermatology and medicine.

By Michael Sherling, MD, MBA

I had been in private practice for over a year when a 33 year-old patient who had come in for a routine skin check caught me off guard. “Isn’t this the age of computers?” he asked, as I scribbled furiously on a sheet of paper. “Can’t you automate this stuff?” I took in a deep breath and thought about how best to respond to his challenge. Medicine is complex and the time and energy it would take for me to put all the necessary information into a computer would not only take me away from patient care, but it would simply take too long and ultimately wind up costing me money. “Patients don’t like when the doctor is facing a computer, and it is less productive for me anyway,” I explained. He then told me, “I don’t believe you. I am sure there is something out there that can do this.”

What the insistent patient didn’t know was that I had spent the better part of a year on a quixotic quest in search of the perfect electronic medical record (EMR). I had started using EMRs in residency and really enjoyed the fact that I could access a patient record from home, the hospital, or the clinic. I used a homegrown system built by Partners Healthcare called the Longitudinal Medical Record (LMR) and the Vista system developed by the Veterans Administration when I rotated to the VA hospital. I didn’t have to worry about my terrible handwriting; other doctors could instantly see my notes and I could see theirs.

Take-Home Tips. Potential barriers to EMR implementation include costs, time required to input information, data entry requirements, and challenges of integration and implementation. Dermatologists evaluating systems should consider how each system addresses these potential problems. Also, assess how government incentives may offset costs. The notion of an Electronic Medical Assistant, as opposed to an EMR, may be one potential solution to common problems.
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bringing all the physicians into one space. I could also access patient laboratory and pathology results in real time and take a quick look at my schedule for the next day.

Common Problems with EMR

As much as I liked using an electronic record, the systems had been generalized to be used by all the specialties in- and out-patient and placed much of the burden on the doctor to input data. I had to type out everything as if I were using a word processor. Moreover, they either didn’t have diagrams or would take a very long time to import one. In addition, they didn’t fill out any of the other forms for labs, biopsies, or prescriptions, so I found myself filling out the same information over and over again, which was not a good use of my time.

When I was typing in the room patients found that I was more focused on the computer than on them. So, I found myself trying to type notes in between patients, but more often would be slogging through a virtual pile of notes at the end of the day. The EMRs relied on me to come up with ways to make their system work better. I spent countless hours writing template after template and ultimately felt like an unpaid consultant.

When I left academic medicine for private practice in September 2008, I missed my word processor-like EMR immediately. For all of its shortcomings, I had become used to the workflow of a computer-based system and now had to get used to a paper-based system. I missed being able to access my patients’ charts when I was away from the office. Now I had to wrack my brain to conjure a patient who had presented weeks or months before when they called in after hours. I missed a simple computer screen instead of stacks and stacks of charts.

So, I began my search for an EMR I could adopt. But now that I would be paying for it, I wanted one that would save time and hopefully even a bit of money. I decided to look at the EMR companies that other dermatologists were using (although with less than 20 percent of outpatient physicians using EMRs at that time, I knew there wasn’t a clear choice). 1

Of the top 10 companies, many of them had strong points, like their practice management systems, their inventory management components, or their advanced scheduling systems. But again, a lot of them demanded templates to write the notes if they weren’t written free hand. And I knew from experience that it could take just as much time to edit a template for an individual patient as it did to write the note from scratch. The programs that didn’t work as word processors were point-and-click systems with so many buttons that they were overwhelming. Or they used a confusing series of pop-up windows.

Ultimately, no one seemed to be able to solve the challenge of getting a note done more quickly than dictation, and I knew that once I committed to a system, it would be very hard to go back. I was going to be putting a lot of money into this and I didn’t want to use something that would not work out. I knew colleagues on their second and third EMR and I didn’t want to wind up in the same predicament. So, I gave up and decided to stick with my expensive dictation system at a cost of 10 cents per line.

The Five Barriers

The things that kept me from buying an EMR are issues that are common to many dermatologists.

Below, I have listed five general barriers to adoption of an EMR that any good system has to overcome:

1. **Cost.** Some systems are given away virtually for free, but they cost a lot in time. And for dermatologists in particular, minutes translate very quickly into dollars. There are other products that are quite advanced but become very expensive very quickly, with licensing fees of around $50,000 and yearly maintenance fees on top of that. Ultimately, dictation costs $10,000-$40,000 a year, depending on how verbose you are.

2. **Time.** No EMR that I have tried has solved the problem of speed. In dermatology we see so many patients that if it takes five minutes to put in
a note, we’ve lost money. If it takes me two minutes to dictate a note, it should take me no longer than two minutes to input that encounter using an EMR. If it takes me one and a half minutes to write a note on paper, it should take no longer to do it with an EMR, because time is money.

With existing systems, if you put the time in up-front to create templates it may save you a little time on the note generation, but by not automating other processes like creating diagrams, writing prescriptions, importing photos, and generating encounter forms, you are not plowing through the paper work any more quickly.

3. **Data Entry:** Doctors, by and large, cannot type and instead try to overcome this barrier by dictating, scribbling, or hiring a scribe, which can cost more than the EMR system itself. Perhaps the biggest problem with existing EMRs is that they place a tremendous burden on the physician for doing data entry, which is time-consuming and not something that any doctor I have ever met enjoys doing.

4. **Integration:** Many dermatologists have legacy systems for their financial and scheduling data that they are comfortable with, and they don’t want to jump to an entirely new system. The problem is that there are an estimated 400 practice management systems out there, and nearly 300 EMR vendors, and most don’t have the resources to talk to one another in a reliable way. So, dermatologists who wish to adopt an EMR may then have to choose between trying to navigate between two systems or going with a larger EMR vendor whose product is not tailored to their specific needs.

5. **Implementation:** Once you decide to buy a system, your whole office needs to learn how to use it, including the doctors, the front staff, the medical assistants, nurses, and physician extenders. It can take months to get everyone up to speed.

In theory, an EMR should be able to overcome these barriers, but I had given up on EMRs because they had proven too difficult for me to implement effectively in practice.

Potential Solutions
It turned out that the 33-year-old patient who had challenged my assumptions about EMRs was Dan Cane, a co-founder of Blackboard, Inc. His company simplified the way students and professors were able to access their coursework and testing materials on-line. The software is now being used by millions of students at thousands of colleges and universities all over the world because it is simple, fast, and intuitive.

After I explained to him that EMRs just didn’t seem to work in medicine and doctors would have to go kicking and screaming as they were forced into using them, he explained that it didn’t have to be that way. If he could do it for the education system, he wondered, why couldn’t he do it for medicine?

Dan challenged me to think a little bigger about EMRs and what they had the potential to do. He soon realized that I didn’t want an electronic medical record at all. I wanted a system that would effortlessly generate a note, simplify my billing, and keep me running on time.

Having outlined the problems of EMRs, here’s an overview of how they may be able to address each of those barriers:

1. **Cost solution.** Some of the most expensive systems use servers that doctors have to purchase for an up-front cost. You should not have to buy a server to use an EMR. Over the last couple of years, people have switched to Software as a Service (SAAS) or “cloud computing.” It is an EMR over the web for a monthly fee. But don’t try to save too much money. If something is well designed, it could give a return on time saved that is more valuable than it may appear based on its price tag. The Federal Stimulus Plan would also give doctors who adopt a certified EMR $44,000 over five years, so this also has to be taken into account when calculating if an EMR system is worth it.

2. **Time solution.** Time is the most valuable asset a dermatologist has. Buy a system that automates as much as possible. In about a minute, you should be able to have a note, a diagram, an
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Five Things to Think About

Cost: Initial investment and long-term licensing and usage fees.

Time: In dermatology time is money. It should take no longer to document in EMR than to dictate.

Data Entry: Existing EMRs place a tremendous burden on the physician for data entry.

Integration: Financial and scheduling systems must communicate with EMR in some way.

Implementation: The whole office needs to learn to use the system, including doctors, front staff, medical assistants, nurses and physician extenders. Good systems are intuitive.

1. Encounter form, a prescription, a lab sheet, and/or a pathology sheet.

3. Data entry solution. A system should take the burden away from the doctors to develop templates and to have to use the keyboard as much as they do. If I put the patient’s name in the note, I shouldn’t have to put it on the prescription. If I put the diagnosis in the note, I shouldn’t have to put it on the encounter form. Taking this to its logical conclusion, if I put something on a diagram, I shouldn’t have to write it in the note. The system should know how to do that.

4. Integration solution. Integration is notoriously “buggy,” and when two systems (e.g., a scheduling system and an EMR) try to talk to each other in real-time, things can get messy. Instead of trying to attain real-time integration go for a “snapshot”—a one-way data dump (e.g., each evening transferring the patient demographics into an EMR). Practically, a snapshot can only be done once a day or so, so any add-ons for the day would have to be entered again into the EMR manually by the front office staff. But this is a small price to pay in terms of staff time for a less expensive and more reliable system.

5. Implementation solution: Seek out a system that is intuitive. You should almost know how to use it on sight. My three year-old was an expert with my iPhone the day I got it. You and your staff should be able to become expert the day you try out an EMR. Look for a product that is clean, meaning that it only has the features that you absolutely need. The screen should not be cluttered. If the manual is more than a binder long, this should put up a bright red flag that it may be quite an undertaking to get you and your staff up to speed on that particular system.

Taking all of these various considerations together, I realized that I didn’t want a traditional EMR. I wanted an electronic medical assistant. So, Dan and I formed Modernizing Medicine, Inc., to develop the next generation of EMRs—the EMA (Electronic Medical Assistant). We debuted it to a small, enthusiastic group of dermatologists at the 2010 American Academy of Dermatology (AAD) conference in Miami Beach and are planning a full demonstration for the Academy ’10 meeting in Chicago this summer.

Conclusion

Like any new technology in medicine, there is great promise in EMRs, but also great peril if systems are not designed and implemented correctly. This formed the foundation of my interest in creating an EMR that would address the five barriers of seamless integration. While the government is incentivizing physicians to adopt electronic record systems, they are not rushing to do so, because many of the ones out there are cumbersome and time-consuming.

Ultimately, like any good technology, an electronic system shouldn’t be something a doctor is obligated to use, but something that he or she actually wants to use. And once a product is able to overcome the five barriers to adoption, dermatologists will gladly enter the electronic age. Whatever systems you evaluate and ultimately choose for your practice, keep in mind these five common problems and consider if and how a particular system offers a solution.

Dr. Scherling is a co-founder and Chief Medical Officer of Modernizing Medicine, Inc.


2. Federal Register Vol. 75, No. 8 Wednesday, January 13, 2010