

EHRs Fix Everything — and Nine Other Myths

David E. Trachtenberg, MD

Two physician groups implement the same electronic health record (EHR) system. One improves quality of care and productivity and saves thousands of dollars. The other reports more errors, loses efficiency and teeters toward bankruptcy. What's the difference, and how can other EHR users achieve the results of the more successful group?

Having realistic expectations about what EHRs will do for your practice and how they'll work is a key to effectively selecting and implementing an EHR system, but too many groups set themselves up for failure by beginning without a clear sense of what they will achieve. This article offers suggestions for dealing with 10 common misconceptions that lead physicians off course on the EHR journey. It is based on my experience purchasing and implementing an EHR system for a 120-provider, 30-site group, as well as my discussions with physicians from more than 50 organizations about their potential EHR purchases. It includes a few references to EHR studies, but, like the authors of one literature review, I found that information on EHR use in primary care was a "descriptive feast but an evaluative famine."¹

MYTH 1 A new EHR system will fix everything

Some groups want to purchase an EHR system to help transform their organization and take it to the next level, but they may be expecting too much. In the book *Good to Great*, author Jim Collins observed that technology works as an "accelerator of momentum, not as a creator."²

An EHR will not fix organizational problems, and it does not guarantee improved efficiency and quality. In fact, installing software is just one part of a journey toward improved efficiency and quality.

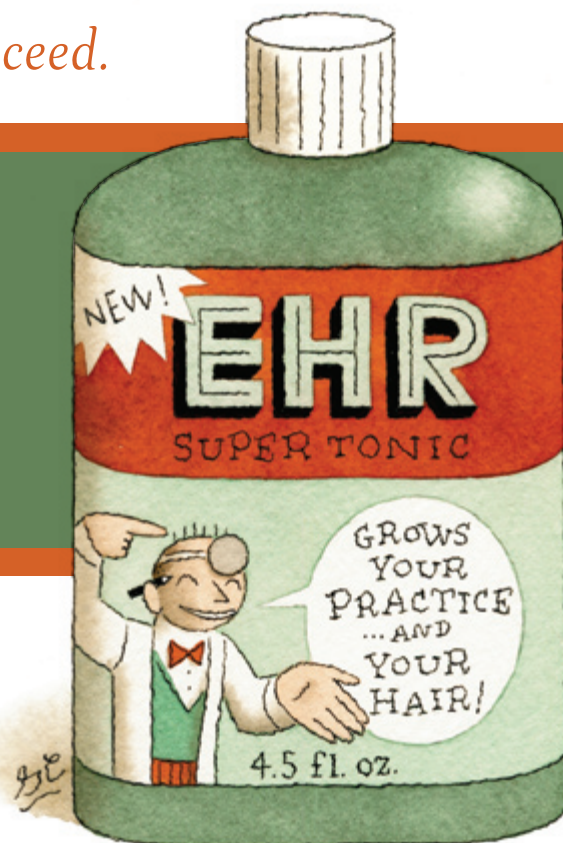
Fact: An EHR system is not a panacea. The transition will create new problems in addition to solving old problems. Think carefully about whether your organization is stable enough to handle the challenges.

MYTH 2 Brand A is the best

I've met physicians who would never seek out an expert on hypertension to ask, "What is the best drug for hypertension?" yet they search high and low for tech experts to ask, "What is the best EHR software?" Just as it is for hypertensive drugs, the correct answer for EHR software is, "It depends."

Fact: There is no perfect software. You should expect your EHR software to do some things well, some things so-so and other things not at all, and what works well for one group may not work for another. The following three considerations will help guide you:

1. Determine your vision. Is it that better documentation will enable you to maximize billing or achieve outstanding disease management or something else? When my group was thinking about which software to buy, we summarized our vision for the EHR system in the phrase "Networked physicians, shared care." Starting from that vision, we tried to purchase software with features that could promote communication with other physicians and integration with other hospital systems.



2. Determine the scope of the project. For example, are you a solo physician in a single office, or will the project involve many physicians located at multiple sites? Some systems are better for small practices, others for larger groups.

3. Determine what other systems need connections to the EHR. Consult with information technology professionals to make sure the software you choose will work well with your other systems.

MYTH 3

Our software needs to work the way we currently work

After one consultant advised my group to produce the best paper record possible and then convert it into an electronic record, one of our physicians commented, “So we should make the best horse and buggy possible and then use it to create an automobile?” We passed on the consultant’s system, though the exchange raised an important point: To maximize the benefits of an EHR system, you

EHR SATISFACTION SURVEY

Get the facts about family physicians’ satisfaction with their EHRs in *FPM*’s user satisfaction survey. We published the results of our last survey in October 2005, and we will field an updated survey beginning this spring. Look for it in an upcoming issue of *FPM*.

need to take advantage of its positive aspects by changing your workflow to accommodate them. It will not be possible to continue doing business as usual.

Fact: An electronic record is not a paper record on the computer, and you will maximize your efficiency only by making significant changes in your workflow. Expect to work differently to make the most of the EHR system’s advantages as well as overcome its disadvantages compared to paper (yes, you will find some).

MYTH 4

Software will eliminate errors

I’ve found that this misconception often surfaces after software is installed. For example, I’ve had more than one frustrated physician say to me, “I thought that installing an EHR was supposed to eliminate drug errors.” Unfortunately, intelligence in software is no substitute for knowledgeable users. As the old adage says, “It is impossible to make anything foolproof because fools are so ingenious.”

My group found that EHR software reduced drug errors but did not eliminate them. In addition, we encountered new types of errors that we never had to think about with a paper record, such as accidentally selecting a liquid preparation instead of a capsule when making choices from a preset list.

Fact: There is no such thing as an error-proof system. You will need to be vigilant as ever and alert to the possibility of new types of errors related to EHR use. ►

Expect your EHR software to do some things well,

MYTH 5 Discrete data is always best

Discrete data entry (also called structured data entry) in EHR systems forces users to document an encounter by making choices from preset lists. For example, by being allowed to select only “No” or “Yes” in the discrete data input below, the clinician will clearly indicate whether eye pain is present:

N	Y	Visual disturbances
N	Y	Eye itching
N	Y	Eye pain

■ EHR projects can be derailed by common misconceptions.

■ Many physicians unrealistically expect an EHR system to be a cure-all for their problems.

■ You should expect to work differently once the EHR is installed to maximize its advantages over paper.

If you plan to extract data from an EHR system, it's best to store information for reporting as discrete data. Unfortunately, there are several drawbacks to collecting discrete data.

First, clicking or typing text multiple times is generally slower than dictating.³ Consider, for example, the time it takes to document a thorough history of a patient's back pain. Using discrete data, it took me 95 seconds to complete 17 clicks for yes-or-no questions, five text boxes that required typing and two drop-down lists. In contrast, it took me 41 seconds to document the same history using dictation. (Of course, the cost of transcription needs to be considered as well.)

Discrete data also produces less readable output than dictation/typing. Physicians have a tendency to avoid discrete data entry whenever possible and instead type (if they are good typists) or dictate (if it is an option). When

this happens, your organization can no longer use discrete data fields to generate accurate reports. Finally, discrete data may not catch the nuances of patient variability.

You need to strike a balance between your organization's needs to collect discrete data for quality improvement and pay-for-performance initiatives and your end users' needs for efficiency. We've done this in my organization by requiring discrete data entry for selected exam elements, such as foot exams for patients with diabetes, and allowing dictation or typing for other parts of the exam.

Fact: Both discrete data and free text have their downsides. Consider using discrete data selectively rather than trying to use it for everything, and establish and continually update discrete data standards for your practice.

MYTH 6 The more templates, the better

When my group was looking for an EHR system, we asked every vendor how many templates their system included. Our assumption was that more was better. However, when we started using our EHR system, we found that most physicians preferred to use relatively few templates. We also found that many physicians preferred to use a point-and-click method to document normal findings and to type or dictate abnormal findings.

Each new template takes time to learn. It is faster for the average physician to use a smaller number of templates he or she is very familiar with. In other settings, physicians have also been found to forgo templates if they take extra time to complete.⁴ Fortunately, a template that primarily documents normal findings rarely needs to be changed. An organizational problem with disease-oriented templates is the need for frequent review and updating.

Fact: Less is more where templates are concerned. Physicians tend to use relatively few, and maintaining them is time-consuming. Make sure that people in your group realize

About the Author

Dr. Trachtenberg is medical director for information technology at Methodist Medical Center Family Practice in Peoria, Ill., and clinical professor of family medicine at the University of Illinois College of Medicine at Peoria. Author disclosure: Dr. Trachtenberg discloses that he spoke about electronic health records at meetings where his expenses were paid by McKesson Corp.

some things so-so and other things not at all.

the true costs of developing and maintaining a template, try to be reasonable about the number of templates you'll need and be clear about who is responsible for updating them.

MYTH 7

Electronic records are more legible than paper records

Many people assume that notes generated by EHR systems are easier to read than a physician's hand-written documentation. The truth, however, is that although the words are easier to read, the documents are often harder to read. The reason for this is usually a low/poor signal-to-noise ratio, meaning the amount of useful information (the signal) is less than the amount of irrelevant data (the noise).

An example of a high/good signal-to-noise ratio that I have encountered came out of an older physician's patient database, which was composed of 3x5 index cards. Each index card contained a patient's first and last name with one-word descriptions of any diagnoses and recommended treatments. For example, "Susan Jones, pharyngitis, penicillin" would be written on a typical index card. These records were almost all signal.

The other extreme I once came across outside my organization was an EHR-generated three-page report for the same diagnosis. Although most physicians would agree that it contained more than four words of good signal, they also would complain that the report contained much bad noise, making it harder to read.

Fact: EHRs can capture lots of unnecessary data, which can make patient records difficult to read. Before purchasing an EHR system, determine what parts of the record require discrete data entry and what parts allow dictation or typing, and assess the readability of the discrete data portions. Look for an EHR system that flags key data for you. During implementation, consider how to format your templates for maximum readability. For example, you could arrange the template with

the assessment and plan first and the supporting documentation following.

MYTH 8

Mobile is best

Most of my physician colleagues love the concept of mobile computing. It is appealing to be able to carry an electronic "chart" that can be positioned to make good eye contact with the patient.

However, as with most other information technology ideas, there is a gap between the idealized concept and reality. When lightweight tablet computers were given to the physicians at my institution, about 70 percent said they didn't want to carry them around, due primarily to their size and weight. Among the roughly 30 percent who weren't fazed by the tablet computer's weight, some lost interest due to the three-hour battery life and smaller screen size (which necessitates more scrolling) and the fact that the tablet computers are relatively slow and expensive when compared with desktop computers.

Of course, many organizations are successfully using tablet computers and other new technologies. That's because they understand the weak points in the technology and how to get around them.

Fact: Mobile is worth considering, but you shouldn't purchase new technology based on an attractive concept. Try the technology by piloting it first. If possible, offer a range of data input options that accommodate multiple preferences. You'll get more buy-in from users this way.

MYTH 9

You must have a detailed plan, and stick to it

With proper planning, you can anticipate problems and avoid many bumps along the road of implementation, but you can also spend too much time planning. Until you start working with a software program, it is

Errors won't disappear when you start using an EHR; in fact, you'll need to watch out for new types of mistakes.

Patient records produced by EHRs can contain lots of unnecessary data, making them hard to read.

Mobile computing isn't always as great as it sounds; try using a tablet computer before you buy them for your group.

You should start preparing for a replacement EHR system before you implement your first.

not possible to understand the fine points needed to do detailed, productive planning. For example, in my office we developed an elaborate scheme for creating groups to handle physician messages. Unfortunately, our EHR program created groups in a different way than we envisioned, and the planning had to be completely redone. It is often helpful to plan a basic “direction” and fill in the details later when you understand the product better.

■ You need to remain flexible during the implementation and be willing to alter plans as needed.

■ It's a good idea to start planning for your second EHR system before you buy your first one.

■ Every EHR implementation is different; distinguishing facts from myths will help you to be successful.

Some believe that the project needs to stick to the scope of its original planning and not deviate. However, new, beneficial features of the software will likely become apparent during implementation. If you rigidly stick to your original plan, you will miss out on the advantages of these features. You may also find that some of the things you planned to do will not work as well as you had hoped once you start using the software.

Fact: The best-laid plans may need to be revised. Start with planning to move the project in the direction of your vision. Then take advantage of the understanding that comes with implementation to use other features of the software and make modifications as needed.

Myth 10 You can stop planning

Unfortunately, all systems have a finite life cycle. With that in mind, you should consider how easy it will be to transfer information from the EHR system you're about to buy to another system in the future. You should also do yourself a favor and delay the inevitable replacement by selecting a system that will be supported for as long as possible before it needs to be replaced.

Most EHR vendors that I've encountered take one of two approaches to life-cycle management. One approach is to eventually stop supporting what you have purchased and try to sell you an entirely new product that uses

new technology for about the same or higher cost than you originally paid. The second approach is to “upgrade” the original product as part of the normal software maintenance cost. In most cases, you will want a vendor who takes this approach.

Fact: You should start planning for a replacement EHR system before you implement your first one. Purchase systems from a vendor with a history of continuous improvement and upgrades, and be ready for the inevitable replacement. Monitor the cycle of your system to anticipate when it will need to be replaced. One way to do this is to ask your vendor what it is developing for its next generation system and when it is expected to be available. Another method is to check for software and hardware used to build the EHR that your IT experts may consider obsolete.

A clear path to success

Every EHR implementation is unique. Not every organization will encounter every misconception discussed in this article. By being aware of the myths that can sidetrack or derail your implementation, you will be more likely to reach your destination. I wish you a smooth and successful trip. **FPM**

Send comments to fpmedit@aafp.org.

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