

# Readiness Assessment: is your practice ready for electronic medical records?

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This is the first article in a series designed to help the practicing physician understand the complexities, benefits, problems, pros and cons associated with electronic medical record systems (EMRs) for the office. Given the increased complexity of larger organizations and the fact that most Fellows practice in groups of six physicians or less, the information in this article is aimed at that target of small ( $\leq 6$  doctors) office practices. This article is aimed at providing an overview of the process, in a very basic form, and provides some basic tools that can reveal overall readiness and obstacles the practice is likely to encounter. Despite acknowledging that there are some "cons" to EMRs, it is this author's firm opinion that practices, and/or more importantly, patients, are better off with electronic medical records systems, specifically ones that provide aid to physicians to improve patient safety and clinical effectiveness via clinical decision support or business intelligence functions.

**The basic objective of any Readiness Assessment is simply to determine inherent and potential risks that may impact the degree of success and return on the investment you will have with any project.**

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## *Example Vignette:*

"Suburban OB/GYN, P.C.", a two-physician practice near a large metropolitan area, is interested in implementing an electronic medical records system in their practice with two offices (one in a building next to the hospital, and another in a suburb 20 miles away). The practice wants to eliminate the problem of faxing records between offices (as when patients go to the "wrong" office) and copying records to send to the hospital for obstetrical patients.

The primary interest in the EMR is from the newer practice member, in her early 30's, who has used electronic medical record systems during her training. The other physician, in his late 40's, is reluctant to change, noting that the practice has been successful doing things on paper.

The office manager, who started with the practice 15 years ago, has moved from front office functions to running the office, and is "fairly comfortable" using the electronic practice management system in the office. However, the practice manager has no experience in any major projects of this sort, and her college degree was not in a business-related field.

The practice completes the readiness assessment tools, including the organizational and cultural assessments. Currently, the practice does not track key areas, and there is no data available for the number of faxes being transmitted between the offices, or the time spent by office staff copying records to send to the hospital (or other places). A concern is also noted with the decision-making process, dominated by the senior physician, and the office manager is reluctant to “cause waves”, often not voicing her concerns about decisions.

The gap analysis indicates that there are physical plant concerns about wiring for computer stations, that the practice does not have an internet connection with sufficient speed and bandwidth for ASP (internet-based) applications, and, most importantly, that the cultural assessment indicates a significant risk of the senior physician not supporting the project by using the EMR if implemented.

The risks associated with one physician using paper while the other uses an EMR are reviewed and return on investment (ROI) calculations indicate that, unless both physicians adopt the technology, the cost is greater with a dual system than with the current paper-based system. A consultant with experience in change management and process redesign is retained to help the practice achieve the stated goals.

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Achieving success with electronic medical records requires the firm foundation of (1) acceptance and (2) recognition of the need and value of EMRs, and (3) support from the top. Should any of these three items be absent, the project is unlikely to succeed.

One should expect significant workflow changes for both physicians and staff (and possibly to patients) with the implementation of electronic medical records. Assessing the degree of impact on each group is time consuming and challenging, but must be done. Having someone that can understand the process of change management is also very desirable. In the smallest of practices, it can be difficult to find an individual that not only understands workflows, but also knows about process maps, change management, and project management. While the tools provided in this article are a good starting point, if the expertise is not resident within the practice, a good consultant versed in these domains will ultimately save your practice time, money, and decrease frustration by helping ensure the final product is one that you need and can live with for the many years that the EMR is going to be your daily companion.

### **Process**

The process of implementing an electronic medical records system begins with identifying the relevant **goal** (is it “electronic medical records”, remote access to records from the

hospital, etc.), the **vision** (is it “paperless office” or “best clinical performance”, etc.), and the **mission**, including the scope. This process should also identify potential team members, and delineate specific risks of failure as well as the benefits of success. {see **Tool #1**}

The project team must include subject matter experts including the front office staff, nursing staff, mid-level practitioners, and physicians. Often, external consultants with experience in the field of EMRs are needed to help guide the team through the project processes. In a practice of one doctor, one nurse, and one front office person, the entire office will have to be on the team! In larger offices, a select few may represent the others sharing their roles. It is still important to have representation by all potential users, rather than a single individual making all of the decisions for the entire practice.

The likelihood of multiple people within a small practice having project management (PM) experience is low, yet at least one person within the leadership team should have some training in PM skills. If no one within the practice has such skills, training of at least some level is recommended. Otherwise the consultant and/or vendor will be called upon to do much of the work and decision making, likely with an imprecise understanding of the required workflows or desires of the practice. This may be the practice manager, or the primary physician leader on the project.

Governance of a small team can become an issue, particularly if the physician leader is a domineering one; practice managers with PM training may have difficulties taking a leadership role, or standing up to the physician on decisions or assessments during the process. Care must be taken to ensure harmonious working relationships are maintained. Outside counsel or consultants can provide a neutral, unbiased viewpoint on process issues should be involved. As much as physicians always want to be right (and, professionally depend on that trait), the views of the other staff members have to be taken into consideration (as they are “right” about their workflows) to achieve optimal acceptance of the EMR.

The cost of placing the project management role onto others (consultant, vendor) is quite high and somewhat short sighted, even in a single doctor practice. Don't forget that project management training will also help in the on-going maintenance of the project, for truly no EMR implementation is ever “done”. There are many sources of training and education for project management. Only a few individuals in small practices need training, and it usually can be accomplished by attending only a few classes at a nearby college or adult education center.

### **What does a Project Team do?**

The practice should understand the responsibilities a project team is charged with: initially, the team should ensure that the project is a viable one. The next step is to ensure that the correct vendor is selected (assuming the project was determined to be proper in the first step). After selection of a vendor and product, the next task is keeping the overall project on time, on budget, preventing scope creep (having more and more items added to what may have started as a simple list of deliverables), and making decisions about specific implementation questions. A team should also continue post-implementation oversight to monitor and optimize the system; there are always updates, upgrades, new modules wanted, etc.

### **Cultural Assessment**

Your practice should be aware of both cultural and operational barriers that would lead to failure. The cultural assessment evaluation tool will be a simpler one in for a single person practice {see **Tool #2**}, and requires a bit more complicated and formal assessment for those practices larger in size and/or with multi-site practices. The need for a formal survey of knowledge, experience, outcomes desired, etc. is a variable that should be considered in budgeting (time and money) as well. Obviously the more formal and complex tasks will take longer and cost more. The reasons this assessment should be done include the need to accurately assess whether or not the organization will accept change, and if so, will it be within the time frame expected or desired? How much energy is required to accomplish the change? Would the change process be divisive or lead to greater harmony?

### **Operational Assessment**

An operational assessment measures the maturity of the processes, measurement systems and data systems in an organization. Having good ideas ultimately is unsuccessful if the idea can never be actually implemented. An organization that has a history of failed attempts to do *anything* should look closely at the processes it has in place, and how closely people follow prescribed policies and procedures.

By reviewing the answers to the questions in **Tool #3**, a basic understanding of the current organizational state can be obtained, and the likelihood of successful deployment of an EMR system can then be ascertained. As the old adage correctly states, speeding up a bad process just makes bad things happen faster... Thus, should the existing practice patterns, policies and procedures have significant (or fatal) flaws, these issues should be addressed prior to moving forward with the information technology project.

While it is possible to try to rectify systemic problems concomitant with implementation of an EMR, the complexities and re-engineering required makes the likelihood of success much lower than tackling the basics first. (If you can't run or shoot a gun now, trying to learn to run and shoot a gun at the same time is more hazardous to yourself and others than doing it sequentially...)

By analyzing the existing organizational structure of the practice, one is then armed with the knowledge needed to build a specific EMR deployment plan that includes the right elements and mitigates the risk of failure. A gap analysis between the current state and the desired end state is recommended {see **Tool #4**}, and the practice needs to look at the work effort to close the gap, and ensure that it has the financial resources, human resources, and will power to close the gap. Again, understanding the process is important, and if the skills are not present in the office, then either education and/or consultants will be needed to help. (If you don't know which end of a hammer to hold, or how to read blueprints, you probably will need help in remodeling your house!) Change management techniques will be required to help everyone adjust to the new order that will come. Continued communication to the staff about what is coming, why, how it impacts them, how it impacts the patients, etc., will be crucial to ensure that the right messages are telegraphed to the entire organization, and to patients.

### **Allocate Sufficient Time**

As part of the evaluation process, one should look at the time line for the project as well, and ensure a realistic expectation is set. While it may seem that moving ahead with implementation immediately is the best way to get things done, it is imperative that the planning is well conceived, the right people have been selected for involvement in the project teams, the right executive sponsors have been chosen and educated on the process, and the time to analyze key metrics has been built into the project time lines. Throwing more people at the project will not necessarily quicken the time to completion either (one woman + nine months to have a baby *versus* nine women at one month each...).

### **Begin Measuring**

If your practice has not already begun keeping track of important parameters, now is the time to start. What is important for your practice to know? How long from the time the patient walks in the door to the time they leave? How many minutes it takes for your staff to find a chart, to get dictation back on the chart, lab results filed, etc.? {see **Tool #5**}

What do you expect these parameters to do in the new paradigm with electronic medical records? What areas would you like to see improved, and by how much?

This is the time to begin thinking about best practices, not only from implementation perspectives, but how you and your colleagues take care of patients.

How many different policies, pathways, protocols, or treatment plans does the office have? Is every doctor different, or are there standardized plans? The expense and complexity of having every doctor have essentially a different implementation is huge. Does everyone really need a different plan on treating yeast infections? Can the office agree on first choice, second choice, third choice, etc. for medications?

### **Next Steps**

Don't let the perceived enormity of the above tasks dissuade you from considering the great value from putting in an electronic medical records system in your office. As stated at the outset, the complexities of a readiness assessment and organizational assessment are in large part dependent upon the size of the organization undergoing this process. Smaller offices will most likely have a much simpler organizational structure, so not as much time and effort will be required.

Even so, it is important to understand, even in the single physician office, that if, for example, the office manager or the office nurse is not on board, (s)he may even sabotage the efforts to implement the system (and, yes, I have seen that happen). If there are individuals who are impediments to the successful outcome (implementing the EMR), the organization must decide whether to abandon the project, or eliminate the obstacle (by reassigning responsibilities of the obstructing individual(s) or, if necessary, terminating the employee(s)).

After having assessed the culture and the organizational readiness, the expected value of the project does need to be realistically assessed. That value proposition (all of the benefits of electronic medical records, such as improved patient safety, remote access to data, enhanced efficiency, reduced transcription costs, etc.) must be looked at carefully compared to all of the costs associated with the project (time, money, political capital, etc.). The next article will delve deeper into metrics, and the hard and soft elements of the return on investment (ROI) calculations.

--Michael J. McCoy, M.D.

Tool #1

Rating scale: **1 to 5** 1 = highest; 5 = lowest

**Project Team Construct**

<b>Team Members:</b>	<i>Examples:</i>	<b>2 MD office:</b>	<b>6 MD office:</b>	<i>Your office:</i>
Practice Management		office manager	office manager x 2	
Nursing Staff		main nurse	office nurse x 2	
Physician Staff		lead physician	2 MDs: lead physician (EMR advocate), reluctant EMR	
Others (imaging, lab, etc.)		ultrasonographer	physician sonographer, mammographer	

<b>Goal:</b>							
<i>Examples:</i>	Scanning paper-based documents	Records viewable from home or hospital	Automated laboratory results retrieval	Dictation into EMR	Daily schedule viewable	Pre-done templates	Improved Patient Safety
<i>Importance rating:</i>							
<b>Vision:</b>							
<i>Examples:</i>	"Paperless" office	Remote Access to records (internet, wireless)	Complete lab automation (orders, results)	Reduced Transcription Costs	Full electronic records and financial systems integration	Improved clinical efficiency	Clinical decision support tools
<i>Importance rating:</i>							
<b>Mission:</b>							
<i>Examples:</i>	Implement EMR in one doctor office, for \$50,000 total budget	Implement EMR for one doctor practice, eliminate all transcription	Implement EMR for 2 doctors, with e Prescribing and problem list only for first 6 months	Implement EMR for two office locations, eliminate faxing records between offices			

Tool #1

Rating scale: 1 to 5 1 = highest; 5 = lowest

**Project Team Construct**

<b>Team Members:</b> Practice Management Nursing Staff Physician Staff Others (imaging, lab, etc.)	<u>Your office:</u>
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<b>Goal:</b>
Your goals:
Importance rating:
<b>Vision:</b>
Your vision:
Importance rating:
<b>Mission:</b>
Your mission:

## Tool #2 - Cultural Assessment

<b>Question:</b>	<b>Example:</b>	<b>Your Practice:</b>
Who makes important decisions for the practice?	Senior doctor	
How are important decisions made?	Over dinner or by himself	
How is information disseminated to others in the practice?	Tells office manager, who informally tells others	
How fast are decisions implemented?	Within 1-2 months, or when everyone learns of new process	
How does the practice recognize success?	No process	
How does the practice recognize failure?	When someone complains	
How does the practice handle failures?	Places blame on someone or on external factors	
How does the practice set up overall goals?	No process	
How clear are the overall goals?	No clinical goals, only financial goals	
Are the goals measurable?	Yes, profitability	
Does everyone in the practice understand the mission, vision and strategy of the practice as a whole?	No	
Is everyone in the practice aware of the impact of the project on the business (revenues, expenses)?	No	

Tool #3 - Operational Assessment

	<i>Examples:</i>	<i>Your Practice:</i>
Does the practice measure success?	Yes	
How?	# of new patients/month; C-section rates (primary, repeat); VBACs; % annual mammograms for age > 60; % annual Pap smears	
Does the practice measure the right things?	Yes	
How often does the practice measure what it tracks?	daily, weekly, monthly, annually?	
Are decisions based on data, or on assumptions?	Data	
Who owns each critical process?	Practice Manager	
Has the data been validated?	Yes	
Are the practice reports structured?	Yes, generated by PMS	
Are there updated process maps of the most critical processes?	No	
Do the executives (MDs, Office Manager) know what a process map is?	No	

**Tool #4 - Gap Analysis**

**Example:**

<b>Parameter</b>	<b>Current State</b>	<b>Future State</b>	<b>Gap</b>	<b>Plans to Address</b>
Organizational Leadership	Unilateral decisions by physician	Team decisions by physicians, nurses, office staff, and ancillary staff	Organization governance not in alignment with needs	Restructure governance and decision-making to accommodate needs
Metrics tracking	Tracks only number of patients by category (new patient, return, # of deliveries, etc.)	Track time from arrival through exit, track clinical parameters (and P4P metrics)	Insufficient metrics identified: time-based (e.g., time from entry to exit), care-based (e.g. \$ / patient for transcription, % compliance for annual Pap smears)	Identify and begin tracking appropriate metrics: time-based, care-based
Education	Staff anxious about computer skills and their basic computer competency	Require complete utilization of computers for charting, documentation, prescriptions, inter-office communications	Inadequate education on basic computer skills; education needs for specific EMR selected	Basic computer education classes mandatory for all staff (available through hospital, local high schools and Community College)
Project team skills	No Project Management skills on any team member	Need to have one or two individuals with basic PM skills	Basic PM skills	Will have office manager and one nurse attend project management classes next semester at Community College
Physical environment	No wireless access points for wireless network; printers only local (attached to PCs), not networked; antiquated PCs (over 1.5 years old), DSL only for internet access	Secure Wireless Access Point for intranet; T1 or better for internet access; current PCs or Tablets, or upgraded memory/OS for existing PCs.	Need installation of wireless network and internet connectivity, PC upgrades or purchase of new devices	Retain consultant for network and connectivity recommendations; RFPs for hardware requirements
Culture	Staff not used to team activities and responsibilities; decisions top-down, with ineffective or inconsistent communications on priorities	Team decisions made and implemented by physicians, nurses, office staff, and ancillary staff; improved communications	Organization governance not in alignment with needs	Restructure governance and decision-making to accommodate needs; change management tools and techniques to foster collaboration

### Tool #5 - Measurements

**Example:**

<i>Parameter</i>	<i>Current State</i>	<i>Future State (with EMR)</i>	<i>Expected Change</i>	<i>Actual Change</i>
Time to find patient chart at check-in (paper world)		-		
Time to find patient chart for phone call (paper world)		-		
Time to find patient chart (electronically)	-			
Time spent dictating notes (daily total)				
Time from dictation to posting note on chart				
Time spent documenting note electronically	-			
Total patient time from check-in to exit				
Time from lab order results receipt to MD sign-off				
Time from lab results MD sign-off to patient notification letter or phone call				
Time spent copying records (daily)		-		
Time spent with nurse				
Time spent with physician				
Number of after-hour calls daily (no records available to review)				

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