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# EMR Evaluation & Planning Toolkit

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<b>EMR TOOLKIT</b>	<b>3</b>
<b>PROCESS FOR PHYSICIAN PRACTICES</b>	<b>4</b>
<b>STEP 1</b>	<b>5</b>
<b>WHAT'S NEEDED TO GET STARTED</b>	<b>5</b>
<b>READINESS ASSESSMENT</b>	<b>5</b>
<b>STEP 2</b>	<b>9</b>
<b>NEEDS AND WORKFLOW ANALYSIS TOOL</b>	<b>9</b>
<b>WORKFLOW ANALYSIS TEMPLATE</b>	<b>10</b>
<b>PRACTICE MANAGEMENT TOOL</b>	<b>11</b>
<b>TECHNOLOGY ASSESSMENT</b>	<b>11</b>
<b>STEP 3</b>	<b>13</b>
<b>VENDOR DEMOS</b>	<b>13</b>
<b>BUDGETING TOOL</b>	<b>13</b>
<b>SETTING EXPECTATIONS</b>	<b>14</b>
<b>STEP 4</b>	<b>15</b>
<b>VENDOR EVALUATION</b>	<b>15</b>
<b>BACKUP</b>	<b>18</b>
<b>SECURITY</b>	<b>19</b>
<b>VENDOR COMPARISON</b>	<b>20</b>
<b>TEMPLATES</b>	<b>21</b>
<b>COST</b>	<b>22</b>
<b>CONTRACT NEGOTIATIONS</b>	<b>22</b>
<b>AFTER THE CONTRACT IS SIGNED</b>	<b>23</b>
<b>STEP 5</b>	<b>23</b>
<b>IMPLEMENTATION STEPS</b>	<b>23</b>
<b>STEP 6</b>	<b>25</b>
<b>ADOPTION</b>	<b>25</b>
<b>ADDENDUM: HITECH ACT AND IMPLICATIONS</b>	<b>26</b>

### Overview

Deciding whether or not to purchase an electronic medical record (EMR) is a big decision. Even bigger; the decision of which EMR product to purchase. This toolkit is intended to help guide you through the evaluation process: from determining your need for an EMR, to which product to purchase, to understanding the commitment and challenges that come with implementing an EMR. There isn't a one-size-fits-all EMR, and only you can decide which solution is best for your practice.

We've broken the process into several steps and provided approximate timeframes to complete each one. As you'll see, the entire process can take anywhere from 15-24 months. Think of it as short-term inconvenience for long-term benefit.

This toolkit was compiled from many sources, including our own lessons learned during implementations in both employed and affiliated practices. We've tried to cover all of the important topics and areas for consideration, but we may have missed some. Use this toolkit in the spirit with which it's offered: as a tool to help guide you through the questions to ask, things to consider, and most importantly, expectations to set as you begin the process of selecting an EMR.

**Throughout this toolkit we provide additional industry resources for tools and guidance in assessing and planning for your EMR. Use these resources to aid you in the process.**

**Note:** the initial assessments require quite a bit of thought, effort, and time on your part. Doing this work will help you choose the most appropriate EMR solution AND it will help significantly as you begin implementation.

**Disclaimer:** The information contained in this toolkit is for general information purposes only. While we endeavor to confirm that this information is accurate and complete, this toolkit is no substitute for you conducting your own independent review of the relevant information and consulting with your EMR consultants for options specific to your situation.

## Process for physician practices

<b>STEP 1</b>	
<b>Readiness assessment (1 month)</b>	What's needed to get started
	Understand your practice's readiness for an EMR
<b>STEP 2</b>	
<b>Define practice needs (1-3 months)</b>	Needs and workflow analysis tool
	Practice management tool
	Technology assessment
<b>STEP 3</b>	
<b>Evaluating the solution (1-3 months)</b>	Vendor demos
	Budgeting tool
	Setting expectations
<b>STEP 4</b>	
<b>Establishing contract with vendor (1-3 months)</b>	Vendor evaluation
	Contract negotiations
<b>STEP 5</b>	
<b>Implementation (3-6 months)</b>	Work with EMR implementation team
	Implementation timeline
	Lessons learned
<b>STEP 6</b>	
<b>Adoption (6-15 months)</b>	Evaluate solution
	Modify and improve EMR based on experience and need

### **Resources**

Several industry organizations provide guides and tools for practice assessment and planning:

AMA: <http://search.ama-assn.org/Search/query.html?qp=&TR=&TD=&qc=public+amnews&qt=emr>

Illinois Foundation for Quality Healthcare:

[http://www.ifqhc.org/provider/prevention/pro\\_prevention\\_ehr.html](http://www.ifqhc.org/provider/prevention/pro_prevention_ehr.html)

HIMSS: <http://www.himss.org/asp/ContentRedirector.asp?ContentID=66523>

## Step 1

### What's needed to get started

Pull your team together. Identify who will be involved in the evaluation and selection of the EMR product and begin including them in the process. Depending on the size of your practice, an individual may take on multiple roles. You might also want to consult with professional services, such as a physician or healthcare professional organization or a consulting company, to help with managing these roles. Some roles to consider:

- **EMR Lead** – responsibilities will include group funding applications, agreements, declarations, etc. This is not necessarily a technical role.
- **EMR Committee** – should include members from all areas of the practice, including other healthcare providers and administration. The committee members will be responsible for guiding the practice through the acquisition, implementation and adoption of IT, and for communicating to all physicians and their healthcare teams.
- **Physician Champion** – generally a physician group member with an interest in moving the group forward to implement a CMS. In-depth technical knowledge, while advantageous, is not necessary.
- **Project Coordinator** – will manage the project implementation and may report to the EMR Committee. This person should be detail-oriented and organized, and have a good understanding of the project as a whole. The coordinator will need to work closely with vendor staff and be responsible for communicating project status & details within the practice. In-depth technical knowledge is not necessary but would be an asset.
- **Technical Coordinator** – requires an in-depth knowledge of hardware, software, networking, and security issues.

Set aside dedicated time to complete the assessments, review your selection criteria, and meet with vendors to view their products.

Begin completing the enclosed assessments.

### Readiness assessment

The following readiness assessment will help you begin the process of evaluating your practice's readiness to implement an electronic medical record. Place a checkmark on each line under the statement that most accurately reflects your practice.

*Tip: Don't panic if you haven't started some of the activities in the assessment. This list will help you identify what you **need** to start . . .soon.*

Statement	Yes	No	In planning
<b>Business Goals</b>			
The practice's long-term strategic vision includes an EMR			
Physician leadership views an EMR as key to meeting future organizational goals			
There is a clear and defined set of EMR goals and measurable objectives, or they are being developed currently			
Physician leadership understands EMR and the business benefits it can bring			
Physician leadership understands that during the implementation of an EMR, productivity levels may decrease (sometimes significantly), and are willing to accept productivity loss during that time			
<b>Commitment/Sponsorship</b>			
The physician leadership understands the financial and time commitments that the initiative requires and is willing to make these investments			
Physician leadership is committed to providing the appropriate level of resources to ensure success of the EMR			
The organization is prepared to reinvent, re-engineer, and improve its patient-oriented processes and workflows if needed			
There is a physician champion willing to take a leadership role in an EMR implementation by taking responsibility for key objectives, guiding the implementation team, and helping to promote the system to the physician community			
<b>Communication/Perception</b>			
All stakeholders potentially affected by an EMR initiative have been identified			
Staff have had an opportunity to ask questions regarding the EMR initiative			
Staff members understand the benefits of an EMR and are enthusiastic about using the new system			
Stakeholders have been/will be included as part of the project team from the start of the project			
All stakeholders understand their role in making the EMR initiative a success			
<b>Patient Orientation</b>			
Every department in the organization has a strong patient focus			

Business decisions are driven by patient needs			
Methods for capturing and enhancing patient care have been identified and documented			
EMR design will be driven by what is important to patient care and patient satisfaction			
<b>Workflow and Processes</b>			
Current workflow and processes have been or will be identified and documented			
The organization has identified and prioritized areas where an EMR could be best applied			
The organization has identified ways in which an EMR will improve current workflow and processes			
<b>Technology Evaluation</b>			
Your staff is computer literate			
A list of evaluation criteria was/will be used in the EMR vendor selection process			
A clinician-defined user interface(s) was/will be a primary consideration in EMR software selection			
An IT infrastructure is either in place or under development that will support the processes of the EMR with minimal downtime during its implementation			
The organization has established service levels that must be met by the EMR system used to deliver patient care			
<b>Data Management</b>			
The organization recognizes the importance of integrating databases containing patient information			
Data accuracy and integrity procedures have been addressed and rectified			
A decision will need to be made on whether to convert data or migrate data			
Interfaces have been defined for Lab, Radiology, faxing, etc. for receiving data			
Chart Migration vs. Chart Archival: What will be transferred to the EMR?			
<b>Measurement</b>			
The EMR initiative is/will be justified on a return on investment (ROI) basis			
Ongoing measurement systems have been/will be developed to			

validate that the rollout has met project goals			
<b>Training/Support</b>			
A budget is/will be in place to provide end-user training			
Training for all user groups has been/will be scheduled well in advance of the final rollout			
A budget is/will be in place to provide reasonable coverage for EMR support services			
Staff is/will be in place to implement, provide support for, and maintain the new EMR system			
Facilities have been defined and equipment secured for training			
<b>Totals</b>			

Add the total number of checkmarks in each column.

- A high number of Yes selections (30+) mean that you are well positioned to implement an EMR initiative.
- If your responses fall mostly into the No/In Planning range (25-30), then your organization may want to further develop its current processes, attitude, and strategic plans before pursuing an EMR initiative.
- If the majority of your responses are No selections (25+), implementing an EMR initiative at this time would likely result in failure.
- Any No statements are red flags that should be addressed and rectified before your organization moves any closer to EMR implementation.

### **Resources**

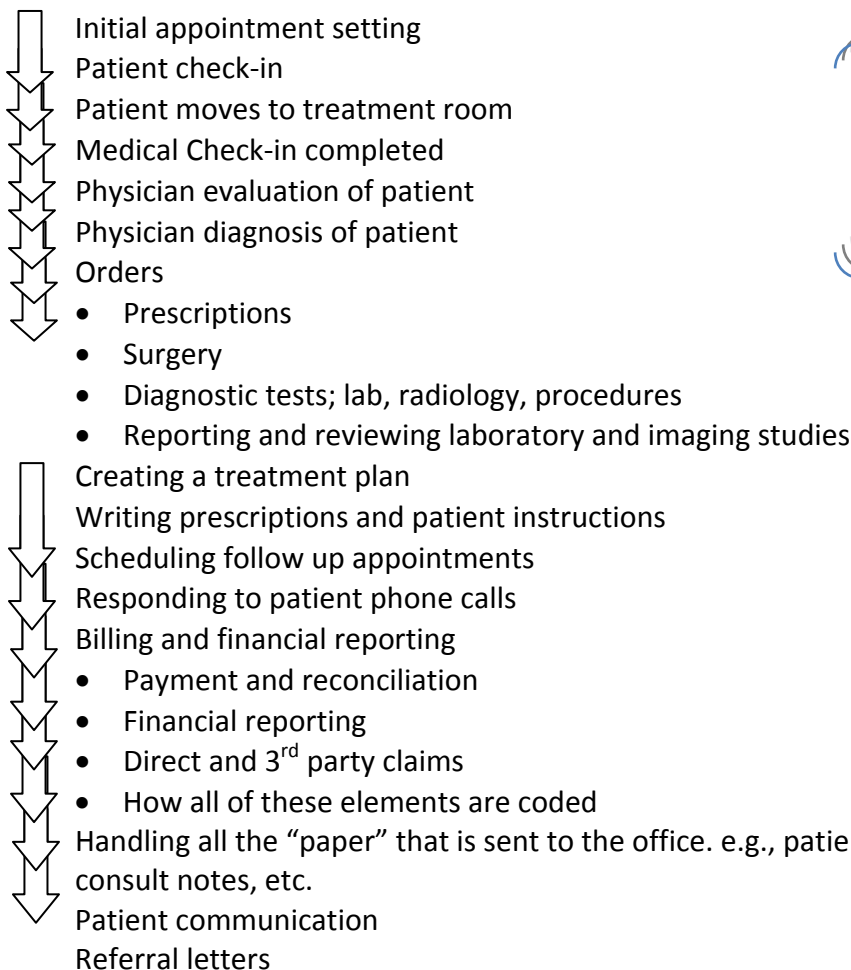
AMA Self-Assessment: <http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/health-information-technology/putting-hit-practice/selecting-hit/self-assessment.shtml>

## Step 2

### Needs and Workflow Analysis Tool

As part of your practice's readiness assessment, you should identify your current needs and workflows. While your workflow may change as a result of implementing an EMR, analyzing your current workflow will help you establish your EMR criteria and may help you identify ways in which an EMR can improve your workflow.

Take a close look at your office processes and procedures. It may be helpful to review how a patient moves through the office:



*Tip: If you have a manual of office procedures, use it as a resource to complete your workflow analysis.*

Review all procedures, even the mundane ones, to help identify where electronic records may provide improved efficiency, accuracy, and better patient care.

The following template will help you outline your practice's current processes as well as what can be improved through the use of an EMR. Complete the template for each major process in your practice:

## Workflow Analysis Template

<p><b>Current Process</b></p>	
<ul style="list-style-type: none"> <li>• What are the steps to perform this process?</li> <li>• Who performs each step?</li> <li>• What tools or systems are used to get perform this process?</li> <li>• What is the purpose of this process?</li> </ul>	
<p><b>Efficiency</b></p> <ul style="list-style-type: none"> <li>• What about the current process works well?</li> <li>• What difficulties are there in performing the process?</li> </ul>	
<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• What impact do any difficulties have on the practice and who is affected?</li> </ul> <p><i>For example: Does the difficulty increase patient wait time?</i></p>	
<p><b>What needs to be done?</b></p> <ul style="list-style-type: none"> <li>• Indicate what changes could be made to improve this process</li> <li>• Identify how technology could improve this process</li> </ul>	
<p><b>Desired outcome</b></p> <ul style="list-style-type: none"> <li>• List the benefits of making this change</li> </ul> <p><i>For example: Changing the process by using technology would reduce patient wait time</i></p>	

### **Resources**

AMA workflow considerations: <http://www.ama-assn.org/ama/no-index/physician-resources/16759.shtml>

Illinois Foundation for Quality Healthcare workflow analysis: [http://www.ifqhc.org/provider/documents/workflow\\_assessment.pdf](http://www.ifqhc.org/provider/documents/workflow_assessment.pdf)

## Practice management tool

There are many EMR vendors that have a Practice Management application built into their system. Many of these products can be a total replacement of existing applications. Some of the EMR vendors have taken a “best of breed” approach, meaning they have focused their efforts on a particular feature or function. **Be advised that not all EMR vendors have the capability to integrate with an existing software product. This is all very important to identify prior to committing to an EMR vendor.** Running separate systems simultaneously can bring much unneeded frustration if not appropriately integrated in the beginning. The number of modules that can be integrated can vary significantly from vendor to vendor. Consideration of the charge for an HL7 (covered in the vendor evaluation section) interface should also be taken into account. The interface application can cost up to an additional \$3,000-\$15,000 to keep an existing software application. Proper management of this interface is important.

## Technology assessment

	Yes	No	In planning
The practice has access to high-speed Internet (DSL or cable)			
The practice has or is planning to add a dedicated T1 line (it is not shared with any other services such as phone)			
The practice has identified the criteria for choosing an EMR vendor			
An internal systems manager, charged with <i>overseeing and coordinating</i> all systems management activities (i.e., security, backup, antivirus and system updates) has been identified			
A person is designated to oversee the implementation of the EMR (not necessarily a technical role)			
A person is designated or contracted to provide IT expertise and support for implementation of the EMR (this is a technical role)			
A person is designated to provide the actual technical support and work with the systems manager (security, backup, updates and problem-solving)			
You have an Exit Agreement in place that describes what happens to the hardware and software in the event a physician leaves the clinic			
A designated person has been identified to test and validate the data processed through the interface before going live with the interface			
Any renovations required to implement the EMR have been made (for example, configuring office space and exam rooms for computers)			
A plan is in place for physicians who need computer training			
A plan is in place for staff who need computer training			

The following major challenges to introducing technology into your practice have been identified and addressed:

- Financial cost
- Physician or staff resistance
- Computer literacy
- Patient concerns
- Office layout
- The time it will take to implement the system
- The time it will take to redesign workflow

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## Step 3

### Vendor demos

Prior to inviting a vendor to show a demo, you may want to send out requests for information (RFI) to a few vendors so that you can narrow the field. This will help you readily eliminate vendors and products that don't meet your practice's needs. It will also help you compile a list of questions that may not have been addressed in the RFI.

If you have not worked with an RFI previously, some examples follow. These may not cover all pertinent information for your practice, but they do provide a general guideline that you may find helpful.

#### **Resources**

HIMSS RFI samples: [http://www.himss.org/ASP/topics\\_FocusDynamic.asp?faid=262](http://www.himss.org/ASP/topics_FocusDynamic.asp?faid=262)

AMA (type "RFP sample" in search box): <http://www.ama-assn.org/ama/home/index.shtml>

After selecting a group of vendors and products to consider, schedule time for everyone on the EMR committee to see a product demo.

For your first demonstration, you may want to keep the presentation at a high level (the 40,000 foot view) to help you eliminate products that clearly won't meet your practice needs. In the beginning of the presentation have your checklist in front of you. Be prepared to identify your needs and desires of a product offering. Tell the presenter what you want to see.

Once you narrow the field down to one or two products you like best, spend more time on them. Ask to see the workflow for a patient as well as other workflows that are related to patient care follow-up (e.g., test results, referrals, telephone encounters, etc.). Ask the presenter to show you a patient encounter. Provide some "what if" scenarios to the presenter.

### Budgeting tool

Once you begin speaking with EMR vendors, you will begin to have an idea of the costs of various EMR products. To help you carefully plan which system will provide the most value for your practice, you should develop a comprehensive budget.

One of the biggest reasons for de-installation of an EMR is that it costs more than the practice anticipated. You can help ensure that this doesn't happen with your practice by fully understanding all of the costs involved.

Some things to keep in mind when adding line items to your budget:

- Cost of system or licensing fees
- Cost of upgrades and service packs
- IT consultants or IT staff
- Fees for backup service
- Customization fees
- Cost of security
- Cost of hardware, including servers, laptops/desktops/tablets, monitors, scanners, etc.
- Cost of other system interfaces, such as practice management system, lab results, hospital connectivity
- Cost of downtime during training

- Cost of training
- Cost of storage for archived paper files
- Internet service fees
- Vendor fees for hours spent over contractually agreed upon hours

These are just some of the items to consider when developing your budget. We've listed some resources that provide more comprehensive budgeting tools.

### **Resources**

AMA tools for financing and ROI: <http://www.ama-assn.org/ama/no-index/physician-resources/16766.shtml>

HIMSS ROI calculator: [http://www.himss.org/ASP/topics\\_FocusDynamic.asp?faid=206](http://www.himss.org/ASP/topics_FocusDynamic.asp?faid=206)

## Setting expectations

### **Set realistic expectations by taking into consideration:**

- Master file builds – if you assign staff to develop these, you must allocate the time for them to do it. These are not tasks that can be incorporated into their daily activities.
- Training time – this is often the first item cut when the budget begins to be stretched. Training cuts on the front-end ensure problems at go-live. Cutting training increases your cost over the long-term.
- Testing – testing of your builds, interfaces, workflows, and processes requires dedicated resources and time. These are not tasks that can be incorporated into daily activities.
- Any changes from or additions to the negotiated contract can and will cost more money. Plan for and review your contract thoroughly. Be conscious of any requests that fall outside the contract and ask for time and expense estimates in advance.
- Do not automatically accept the vendor contract. There is always room for negotiation.
- All EMR products require some build and customization to your practice and are almost never plug-and-play or out-of-the-box solutions.
- Your current patient volumes – create a baseline of current patient volumes and monitor those metrics during and post implementation. This will help you better identify your targets at the end of implementation.

### **Set realistic expectations for reduction in schedule:**

- At least one week before go-live (typically reduced 25%-40% during that week)
- Following go-live until the learning curve has been achieved (typically weeks 1 & 2 reduced by 50%, weeks 3 & 4 by 40%, weeks 5-8 25%, week 9 and forward full schedule – all dependent on the individual providers)
- All providers should be at 100% of their pre-go-live volumes by 3-4 months of using the application.

## Step 4

### Vendor evaluation

When evaluating your vendors, there are several areas to focus your attention. You'll want to understand their track record with the product, their reputation among their existing clients, and their customer support philosophy. You'll also want to know what their long-term business strategy is since you'll want them to still be around five to 10 years from now.

Talk with and visit doctors who are using the company's EMR software. Some questions you may want to ask:

- What has been your experience with vendor x?
- How did vendor x handle the transition from paper to their EMR?
- How supportive was vendor x?
- Did vendor x provide adequate training?
- Are you using all of the features of your EMR?
- If not, which features are you using and why aren't you using others?
- If you were starting this process over, would you still choose vendor x?

Keep in mind, no implementation goes as smoothly as everyone would like. There are always unforeseen challenges and hiccups along the way, especially when making as significant of a change as moving from paper to electronic systems. Make sure you're comfortable with your vendor's approach to handling those challenges when they arise.

#### **Ability to customize**

Each practice operates differently and should consider the unique customization they need to fit their practice. This customization is not an overwhelming task to the EMR vendor; nor is it an excessive expense to the practice. Be sure to explore the vendor's willingness to complete the desired custom forms (templates) and workflow.

#### **Availability of training**

Any EMR software that you are evaluating should be easy to use. That means anyone, even those without a technical background, should be able to learn how to use the software without any major issues. To make a smooth transition from manual to automation, proper training should be provided. This training should be conducted by trainers with clinical backgrounds as well as experience with the vendor software. You may want to ask the vendor for professional bios of their available trainers. Ask if there are fees for training beyond a specific limit.

#### **Post-implementation support**

It is unrealistic to expect staff to know everything about the software after undergoing the training. Problems may still arise while using the software. Your vendor should provide post-implementation support. Ask the vendor for a monthly report on the service calls that they receive from your practice. This will help you identify if there are training or other issues to be addressed. Ask the vendor if their support is available 24/7 every day and what happens if they do not meet your contract requirements for support resolution (e.g., calls aren't resolved in a satisfactory or timely manner). Ask if there are additional fees involved for after-sales support.

#### **EMR Industry certifications, ratings and awards**

In recent years, many organizations have started ranking EMR vendors. Some of these include CCHIT, TEPR, AC Group, KLAS and MS-Hug. The Certification Commission for Healthcare Information Technology (CCHIT) is a private nonprofit organization with the sole public mission of accelerating the adoption of robust, interoperable health information technology by creating a credible, efficient certification process. With the passage of the American Reinvestment and Recovery Act of 2009, qualified EMRs that are eligible for stimulus funds must be certified by CCHIT.

### **Resources:**

The AMA provides an excellent collection of resources for evaluating IT needs. <http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/health-information-technology/hit-resources-activities/models-diagrams.shtml>

AMA Vendor Assessment

<http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/health-information-technology/putting-hit-practice/selecting-hit/vendor-assessment.shtml>

<http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/health-information-technology/hit-resources-activities/checklists.shtml>

HL7 list of EHR functions

<http://www.centerforhit.org/online/chit/home/cme-learn/tutorials/ehrcourses/ehr120/basicfunctions/hl7.html>

### **ASP versus Client/Server-based systems**

When choosing an EMR product, you will need to determine the type of EMR model you want. There are two options:

**ASP or Web-based EMR** – ASP is a remotely hosted software system accessed via an internet web browser, similar to the model used in online banking. This remotely hosted system is accessed by paying a rental or service fee. The server is secure and HIPAA compliant and is not located in your office. All technical aspects of the server are managed by a professional IT company, and you pay a monthly access fee (or per occurrence fee) for the services of this IT company.

- The cost of an ASP-based system is relatively low in the beginning, however because the fees never stop, the cost over the long term adds up and usually ends up being more expensive than using a Client/Server-based system.
- Almost all computing is done on the remote server, thereby reducing the minimum computer hardware requirements on the clients/workstations. The benefit to this model is that the cost becomes an operating cost versus a capital expenditure.
- ASP allows you to access all of your information at any time, from any place with internet access.
- With an ASP-based model, you don't have to worry about purchasing additional equipment, managing software downloads and updates, or back up your data in the event your computer systems go down.

*Tip: Test the speed of the ASP model in a live environment. Think of your practice; the number of patients seen daily, the time spent while in the exam room and time spent completing the final note.*

- Tell the EMR vendor what systems you have in place (which ones you plan to keep) and be sure to get (in writing) from the EMR vendor that they have an HL7 interface to integrate your existing system(s) with the new EMR system.
- New features and enhancements are usually built into your monthly access charge and can be added to your system instantly without your involvement.
- ASP is dependent on internet connection. If your internet connection goes down you may not be able to access your data. You should ask your vendor if they have a disaster recovery plan in place to get your data to you through another means, such as faxing the medical summary for the patients currently being seen.

You may be best served by an ASP if you are:

- A practice with limited financial capital for start-up costs, but can afford a monthly lease agreement.
- A practice with no one in your office to handle technology problems.
- A practice that is unwilling or unprepared to do the self-education required to maintain a network.

**Client/Server based EMR** – this means that your practice has its own server (basically a stand-alone super computer) that has the EMR installed directly on it along with all of your data.

Client/Server models allow for quicker response times in the application as the data from the server to the client is transmitted much faster (usually 100 Mbits/second).

- The newer client/server products are capable of offering the “best of both worlds” as they have the speed of a local system plus the accessibility from a remote location.
- Client/Server also boasts the benefits of practices having control over their data. However, with this control comes responsibility; the responsibility of being responsible for your data as you are now open to the risk of theft, fire, hard-drive failure and data corruption.
- Client/Server has no dependency on internet connection. However, if you are connected to other locations via a network, connectivity could be impacted.
- There is a higher upfront cost of ownership as a server and software must be purchased upfront.
- Online backup must be purchased as add-on 3rd party software.
- Manual product updates are usually required (not in all cases) and may have an additional cost.\*

It may make sense to invest in a server and manage your HIT in-house if you are:

- A practice with an existing technology support staff.
- A practice with a technology expert in-house.
- A practice with significant financial resources for start-up costs and that is ready to invest in hardware.
- A practice that is willing to staff a technology professional.

\*Your EMR vendor will make you aware of enhancements and bug fixes as they are available. Check your contract for any charges associated with updates or new releases. The cost of these new releases is as varied as the initial purchase. If you’re not sure what the updates include, schedule a demonstration with the vendor. Ask to see the differences and develop a series of questions. What if you decide to “pass” on buying the new version? Read your contract language. The vendor (in many cases) has

contractual language that allows them to “no longer support” the current version if there have been two additional version releases that were not purchased.

### Acquiring computer hardware and managing the timelines

In most instances, your EMR vendor should be able to provide you with computer hardware specifications to run their EMR. Ask for the minimum specifications and the optimal specifications. Because hardware changes so quickly, you may want to purchase the optimal specifications so that your hardware is not outdated too soon. Also, keep in mind the growth projections for your practice. If you are a three-person practice today with plans to grow to a six-person practice in the next few years, think about how that increased usage and data will impact the hardware you buy today.

*Tip: Research, review, and purchase your EMR before buying the anticipated computer hardware. Your EMR vendor should provide you with minimum hardware specifications.*

There are IT support businesses that can help you evaluate your current, short-term and long-term IT needs. To find these support businesses:

- Ask colleagues for recommendations
- Contact your local Better Business Bureau for a list
- Contact your local Chamber of Commerce for a list

Once you determine your hardware needs, you can begin to compare products and pricing. As an HCA affiliated physician, you also have the opportunity to take advantage of volume discount pricing through HealthTrust Purchasing Group (HPG) – a separate, owned subsidiary of HCA.

To contact HPG, visit their website at [www.healthtrustcorp.com](http://www.healthtrustcorp.com).

## Backup

**Fact:** Statistically 93% of companies that lost their data for 10 days or more due to a disaster filed for bankruptcy within one year. Fifty percent of those same businesses that found themselves without data management for this same period of time filed for bankruptcy immediately. *Source: National Archives & records Administration in Washington.*

By computerizing your patients’ medical records, you are increasing your dependency on computers. Total loss of your patient or financial records can easily ruin your business, legally and clinically. Putting the correct precautions in place is simple and does not need to be expensive. In addition to implementing a good backup system with recent copies being stored off-site, your backup should be tested on a monthly basis by simulating a full recovery from your backup image.

Do you want online backup or tape backup or both? Selecting the right backup system is very important. If you are using an ASP-based system where the data is stored off-site, your vendor will usually take care of the backup for you. But, if you are using a client/server system it is almost always your responsibility. Tape backup systems are the most common and usually cost less than \$1,000 for a complete system, assuming you aren’t backing up more than 100GB of data. Online backup services are becoming increasingly popular for the backup of patient data as it has the benefit of always keeping your data offsite, and protecting you in the event of a fire, server theft, hurricane, earthquake, flood and other natural disasters. While online backup could be your sole backup system, it is usually used in conjunction

with a tape backup or hard drive backup system for redundancy. Don't take backing up your system lightly. Imagine the effect it would have on your practice if all your paper charts vanished from your office.

## Security

With internet and networks come new security risks. This is especially true for medical offices where patient data is at risk and security breaches can be very costly. To help limit your risk of security breaches, be sure to hire the help of a trained IT professional with extensive experience in IT security. Both virus and Spyware protection should be implemented as a minimum security measure. Secure your network with a firewall to protect yourself from unwanted intruders on the internet. Manage client logins to protect your data from disgruntled employees (which is statistically the most common source of security breaches). If a wireless network is to be installed, it's critical that the proper security measures have been put into place to protect from intruders accessing your wireless network from the area around your office, for example, your parking lot.

*Tip: Buy only what is necessary for the beginning stages of the EMR implementation. You don't know what technologies your staff will adopt and which they won't. Don't be in any rush to buy all the necessary hardware right off the bat.*

## Vendor Comparison

	Vendor 1	Vendor 2
<b>Cost</b>		
Cost per physician license		
Cost of annual maintenance		
Cost of upgrades		
Cost of bi-directional interfaces		
Labs		
Hospitals		
Training costs		
<b>Functionality</b>		
Access to Progress Notes in a readable form (text)		
Problem List		
Orders and results management		
Document management (imaging)		
Meds management and Rx writing		
System pre-loaded with templates for my specialty		
Medication Features		
Medication list		
Drug information, including side effects, adverse reactions, overdose, dosages		
Practitioner specific medication list		
E-mail or FAX to pharmacy		
Maintains Rx history		
Drug interactions		
Payer formularies		
Permits automatic data download from outside facilities		
Permits uploading of orders to other facilities (ex. lab orders)		
Maintains profile of available tests/indications		
Flags abnormal results		
Permits tracking of abnormal lab follow-up		
Permits creation of panels		
Alerts for redundant testing		
<b>Implementation</b>		
Vendor-provided implementation team		
<b>Support</b>		
Cost for support during implementation		
Support provided from overseas		
Local support		
<b>Technology</b>		
Client/server-based or ASP-based		
HL7 compliant		
CCHIT certified software		

How often is the software updated?		
Is data encrypted?		
Where is data physically stored?		
Is the data storage protected from physical disasters? (e.g., hurricanes, tornado, etc.)		
What is the vendor's disaster recovery plan?		
What is the level of redundancy for the disaster recovery plan?		
<b>Administrative</b>		
Practice management software		
Query tool		
Messaging/routing integrated with e-mail		
Improved workflow process		
Access and use for ALL physicians		
Appointment scheduling – patient tracking		
Interface to automated reminder tool		
Outcomes analysis		
Patient Utilization		
Quality Report Cards		
Company background		
References available		
Serves other practices in my specialty		
<b>Training</b>		
Vendor-provided training for physicians		
Vendor-provided training for staff		
Vendor support throughout implementation		
Vendor-provided training on upgrades and new releases		
Vendor-provided refresher training		
Complete training manual provided		

## Templates

Most of the EMR vendors will have specialty-specific templates, treatment protocols or macros from existing clients. Ask to see your specialty's templates. These templates can be a valuable insight into the company's programming sophistication. These prefabricated templates may not work in your practice, but will shed light on the EMR vendor's ability to perform the customization needed for your practice. If the EMR vendor you are looking into does not have your specialty template, don't rule them out just yet.

Some vendors will allow you to help create the templates in your vision, and many of the vendors may give you a considerable discount from the purchase price or annual support agreement. This may or may not entice you, but you should know the options. If the company is willing to program these templates for you, ask for a timeline and have it in writing. Do not purchase until the vendor has demonstrated they can customize to your liking. Before signing any contract, get the promises in writing with a 100% money back guarantee or failure to complete within the predetermined and agreed upon time.

If you are looking for an EMR vendor with "ready-to-go" templates remember this; these templates are not your creation and you will need to adjust your workflow. Many of these templates can be

manipulated, but they are not yours. A physician starting a new practice will have very different needs than someone who has been practicing medicine for a long time in the same practice. Consider these differences carefully.

## Cost

### System Costs

The cost for EMR systems varies widely. Costs depend on the type of system you purchase (ASP vs. Client/server-based), the number of physicians in your practice, the number of other system interfaces you require, whether the templates are out of the box or customized, and many more factors. By conducting a cost/benefit analysis and determining an ROI, only you can decide which system provides the most value to your practice.

### Support and Maintenance

How much should you expect to pay for ongoing support? The industry standard is 20% of license fee. A little higher fee should result in exceptional customer support. If a support fee is lower than the standard 20%, you may expect longer hold times and slower technical resolution.

### Resources

HIMSS ROI Calculator: [http://www.himss.org/ASP/topics\\_FocusDynamic.asp?faid=206](http://www.himss.org/ASP/topics_FocusDynamic.asp?faid=206)

## Contract negotiations

Make sure you define your expectations in detail, including timelines for training as well as the “go-live” date for installation of the EMR system. Detail the practice’s responsibilities and the vendor’s responsibilities. Spell out who will buy and install the hardware, who will install the operating system and program software, and who is responsible for making sure all the hardware and software integrates correctly. Detail the costs, possible areas for cost overruns, payment due dates, service level agreements (SLAs) and cancellation provisions.

If your office is using an ASP (application service provider), make sure your practice is entitled to access the data in a usable form at anytime at no additional cost. This will help protect you in case the EMR software company goes out of business or if the product is or becomes unusable. This way, your practice will still have its records.

If you are expecting full integration with the present practice management system, make this clear in your written expectations of the EMR vendor. You may want to include performance goals. If they are not achieved within a certain timeframe, consider the option of a refund, discount and/or returning the product for a full refund should the EMR system not perform as demonstrated.

As part of your negotiation, you will also want to include the cost of any future interface builds and associated support. This would include interfaces to other clinical systems, such as imaging and labs, as well as connectivity to hospital-based systems. Having this cost established in the contract will save you a great deal of time, energy and frustration in the future.

Now is the time to discuss customization requirements and new version release upgrades.

## Resources

AMA Contract agreements: <http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/health-information-technology/hit-resources-activities/models-diagrams.shtml>

## After the contract is signed

Okay, so you've purchased your EMR. What do you do now?

The next step is implementation. It's not as easy as installing some software and getting started. Remember all that planning you did in advance? Now is when much of that is going to come into play.

## Step 5

### Implementation steps

The implementation phase is possibly the most important topic in this toolkit. Unfortunately this topic is often the most overlooked, and in many cases offices thoroughly review the different EMR packages but once the product is purchased, they expect the vendor to take over and bring the implementation to completion. While many vendors'

products are alike, the processes used for product implementation can vary greatly from vendor to vendor. Some offer remote training & installation services while others offer onsite services, and some even give the option of both. Selecting an installation method that's right for your office and your budget is crucial.

*Tip: Before this process is started, all old records and records of deceased patients or patients who have moved should be purged.*

What's important to recognize is that the implementation cost will be a significant portion of your total EMR project cost. At first glance, this cost can seem unnecessarily high, but after recognizing the amount of human hours involved in the implementation and the importance of having a successful implementation, you will better understand the cost.

The implementation phase can be sub-categorized into the following phases:

1. EMR Implementation Planning
2. Prepare your practice
3. Build and Customize your EMR Software
4. Install & Test
5. Plan the changeover strategy
6. Go-Live
7. Maintenance

So what do you do with all those old records? At this point you'll want to plan an exit strategy from the costly paper record. There are many factors which affect this decision, such as number of records, number of active patients, and legal implications. Whichever way you decide to go, you'll need to keep some of your old records for easy access and you'll need to convert some charts to electronic immediately. Consider following these steps to help convert your patient records.

- 1) Purge your records for any patient records where you don't expect to see the patient in the future, move these records to long-term storage.
- 2) Mine your records for all highly active patients (whom you expect to see within the next 3-6 months). Discreet data selected by you will be manually entered and/or scanned into the EMR. It is not recommended to scan the entire chart. At the time of go-live, pull the paper chart to be used as a reference during the first 2-4 visits. Once the provider feels comfortable with the EMR data, move the paper chart to long-term storage. Tag these records in an easily recognizable manner so you know which records have been converted and which have not.
- 3) If you are also converting your financial records including AR and insurance information, you'll need to plan on running your old practice management software alongside your new software in an effort to eventually bring over your self-pay balances to the new system. Many practices generally use and phase out their legacy system over the course of one year.

Hire an IT person if necessary to assist in setting up your computers. If this service is going to be provided by the vendor, it is still recommended to have a local IT team to assist you in the event of an emergency.

You may want to consider using a hybrid record. Hybrid records allow physicians to continue working their charts in a paper format but will often use the electronic super-bill or CPOE module to enter in charges. At the end of the visit, all the paper from the visit is scanned into the system. Taking this approach will help remove your dependency on paper charts, and allow you to use select features from the EMR, such as electronic prescriptions, electronic lab orders, electronic faxing and electronic charge posting.

Another idea is to use a phased approach to go-live: go live with the practice management portion and phone encounters for the first couple of weeks prior to going live on charting. This helps reduce the learning curve for the clinical staff as they navigate through the system and become familiar with adding medications and allergies to patient records.

Once a strategy has been put in place for converting your paper records, you'll want to set a realistic time frame for your go-live date. Depending on the size of your office and expected difficulty of the implementation process, you'll need to decide if you will go live toward the end of your training period or if you'll go live at a later date once you've had a chance to convert most of your active patients' records to the EMR.

Implement a project management system to track tasks, issues, requests and meetings. Tracking your issues as they arise is crucial to the long-term goal of improving your system. Placing these issues into an Excel spreadsheet with an urgency level will help you keep on top of all these issues, and have meetings to discuss their statuses regularly. Be sure to capture any "ticket" numbers assigned to support calls for easy reference.

You will start preparing your practice as soon as you've selected a vendor. At this time, you will work with the vendor, project manager, consultants and IT professionals to purchase the appropriate hardware for the project and prepare your infrastructure for the EMR implementation.

A professional IT company is highly recommended for the integration and networking. You may want to consider separate contracts for the implementation services versus the technical services for equipment and networking. When considering an IT company, ask about the healthcare operations experience of the IT staff. They should have some clinic or hospital experience. As with other services, always obtain a couple of bids to confirm the best deal for your practice. Finding a good IT company is similar to finding a

good auto mechanic. The honest IT company will work hard to ensure your networking is correct and will stand behind their work. A dishonest IT company can run up excessive costs and are not likely to come back in the event of things not working well.

Selecting the right hardware technology for your office is critical to the success of your EMR implementation as well. With so many hardware options available on the market, it can be difficult to find the right solution for your office. Which is better: a workstation in each treatment room or a single Tablet PC that can be taken from treatment room to treatment room? When selecting this technology for your office, choose technology that is not overwhelming to your staff. Give your staff a chance to test this technology out to find out what they will be comfortable with and which technology compliments your office's workflow.

## **Step 6**

### **Adoption**

Once you've implemented your EMR, you'll want to evaluate the solution in place and modify and improve your use of it. As you gain more experience with the system, you may find better ways to perform different tasks, or you may find that something you set up one way would be more efficient if configured another way. However, you will only discover this by using the system. Give yourself some time to work with it and learn. Moving to an electronic medical record involves change, which is always uncomfortable at first. After using your new system for a few months, you'll be able to determine what can really use some tweaking versus what may just have been the discomfort of change.

On February 17, 2009, President Barack Obama signed into law the American Recovery & Reinvestment Act. The health IT component of the Bill is the HITECH Act. The HITECH Act appropriates approximately \$19 billion to:

- encourage healthcare organizations to adopt and effectively utilize Electronic Health Records (EHR),
- establish health information exchange networks at a regional level, and
- ensure that the systems deployed protect and safeguard the critical patient data at the core of the system.

There are two portions of the HITECH Act. The first provides for the creation of the Office of the National Coordinator for Health IT (ONC) and directs creation of standards and policy committees. The second portion allocates \$36 billion that will be paid to healthcare providers who demonstrate use of Electronic Health Records. The net cost to the Federal government is \$19 billion accounting for savings realized through efficiencies, tax revenue and Medicare fee reductions for non-adopters.

### **\$36 Billion in Incentive Payments to Physicians and Hospitals**

The government is focused on two primary goals in this legislation: moving physicians who have been slow to adopt Electronic Health Records to a computerized environment and ensuring that patient data is actively and securely exchanged between healthcare professionals.

As a result, the majority of HITECH funds will be used as payments that will reward physicians and hospitals for effectively using a robust, connected EHR system. One program is for those who see large volumes of Medicaid patients. The other is for those who accept Medicare. To qualify for the incentive payments, both physicians and hospitals will need to demonstrate three things:

1. Use of a certified EHR product with ePrescribing capability that meets current HHS standards.
2. Connectivity to other providers to improve access to the full view of a patient's health history
3. Ability to report on their use of the technology to HHS

To promote more rapid adoption of electronic health records, the incentives span 5 years with the greatest benefits early in the program. Additionally, the program will begin to penalize those providers who do not demonstrate meaningful use by 2015. Incentive payments will begin in 2011 to give providers time to implement and begin using electronic records.

### **Opportunities for physicians**

There are two incentive programs for physicians: Medicare and Medicaid. Physicians will choose program participation.

**Medicaid:** Physicians who see more than 30% of patients paying with Medicaid (20% for pediatricians) are eligible for payments of up to \$64,000 over five years. The incentives will be calculated through a formula that factors in the exact Medicaid mix seen by the provider as well as amounts ranging from \$25,000 in the first year to \$10,000 in subsequent years. Because pediatricians are required to meet a lower threshold, they are only eligible for 66% of the incentive payments described above.

**Medicare:** Physicians who do not have a large Medicaid volume but do accept Medicare can receive up to \$44,000 over the five years. Additionally, physicians operating in a "health provider shortage area" will be eligible for an incremental increase of 10%, and those delivering care entirely in a hospital environment, such as anesthesiologists, pathologists and ED physicians, are ineligible.

**Eligible amounts for adoption each year**

<b>Year first file</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>TOTAL</b>
<b>2011</b>	\$18,000	\$12,000	\$8,000	\$4,000	\$2,000	\$0	\$44,000
<b>2012</b>	\$0	\$18,000	\$12,000	\$8,000	\$4,000	\$2,000	\$44,000
<b>2013</b>	\$0	\$0	\$15,000	\$12,000	\$8,000	\$4,000	\$39,000
<b>2014</b>	\$0	\$0	\$0	\$15,000	\$12,000	\$8,000	\$35,000
<b>2015 or later</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Fee reductions:** Providers who do not demonstrate meaningful use in 2014 will see a decrease of 1% in their 2015 fee schedules from Medicare. In 2016 and 2017, the fee reduction will be 3%, down to 97% of the regular fee schedule. If the Secretary determines that total adoption is below 75% in 2018, the reduction may move to 5%, for a total regular fee schedule of 95%.

**Additional Incentives Currently Available for Physicians**

Through the Medicare Improvements for Patients and Providers Acts of 2008 and PQRI incentives for ePrescribing, a qualified provider can earn between \$6,000 and \$8,000 prior to beginning participation in the Stimulus incentives programs.