



HEALTH INFORMATION TECHNOLOGY

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This program provides information to physicians and practice staff on methodologies for successful adoption of health information technology solutions. The methodologies will be presented in a series of 6 short video modules. The target audience for this program is physicians and practice staff in small practices who are faced with decisions regarding health IT.

Educational Objectives

- Upon completion of this activity, physicians and staff should be able to:
- Formulate an approach to adoption of health information technology for the small physician group practice.
 - Utilize information about health IT adoption methodologies in the decision-making process leading to successful adoption.

Inquire about the content of this CME Program or technical issues:

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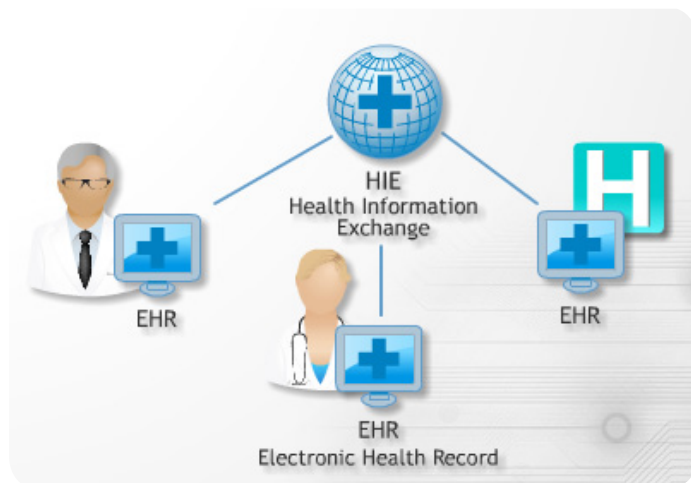


Health IT | Module 1 - Overview of Health IT

This is the first of six Health Information Technology (Health IT) education modules. Our goal is to provide you with an unbiased overview of the topic and to provide easy access to more detailed information if you wish to dive deeper into the subject.

We are in the midst of a revolution in health care technology. The nation is implementing a nationwide Health IT architecture. Health Information Exchanges (HIEs) are connecting to Electronic Health Record systems (EHRs) in hospitals and physician practices.

New government incentives, combined with technological advances, are providing more and more reasons for physicians to implement Health IT. Our purpose is to provide you with the information you need to make an informed decision regarding the technology that is most appropriate for your practice.



These modules will be most valuable for smaller practices who have not yet implemented Health IT. If you are in a practice with 10 or fewer physicians, there are about 300,000 other practices of your size in the United States and less than 15% have an EHR. You are not alone!

We have designed these modules with your busy practice in mind. Each module will take you only a few minutes to view. Since we have to be brief, you can see more detailed information in the right-hand column throughout this document.

Course Overview

Here, in Module one, we present an overview of the impact of Health IT on the practice of medicine and its likely effect on your practice.

In Module two we help you assess your own practice to determine your need for Health IT and to collect the information you need to select an EHR and prepare for implementation.

In Module three we help you decide which type of EHR would best fit your practice and give you some pointers on how to select a specific vendor.

In Module four we explain how to plan and prepare for your EHR and describe methods you can use to reap the most benefit with the least pain.

In Module five we present a variety of ways to implement your new EHR.

Finally, in Module six, we talk about what to expect and plan for once your EHR is implemented.



Health IT | Module 1 - Overview of Health IT

Let's begin by defining some common terms that we will use throughout the modules. We won't spend a lot of time on these, so if you would like a more detailed definition, reference the right-hand column.

Common Terms

There are many types of Health IT systems. At the top level of the rapidly forming national infrastructure are HIEs, or health information exchanges. These are local, state or regional networks that exchange health information among hospital and physician office EHRs as well as with other HIEs. Most HIEs are still in the process of being formed.

EHRs are computerized systems that store and provide access to patient-specific clinical data. Separate kinds of EHRs support hospitals and physician practices.

There are many types of EHRs for physician practices; some require a server be physically located at the practice. Others use servers that are based remotely and accessed via a private network or a secure internet connection.

A practice can acquire a "complete EHR," which includes all of the functionality required for certification in one software package. Alternatively, a practice can assemble several certified EHR modules, which, when used together, provide full functionality.

PHRs, or personal health records, are software systems that provide patients with the ability to store and access their own health information with or without participation by their physician. Some PHRs are linked to EHRs, while others are stand-alone.

ePrescribing functionality allows physicians to prescribe medications and transmit them to the pharmacy electronically. ePrescribing can be implemented as part of a complete EHR or as a separate module.

A Patient Registry is a system that keeps track of patients with a specific condition. The registry tracks clinical measures appropriate to that condition, such as measurements of hemoglobin A1C for a diabetic, allowing the practitioner to more easily and proactively manage the patient's care.

Other types of health care software and services are also becoming more available. Many patients now download mHealth software to their smartphones. These apps provide patients with access to clinical information and help them locate health care services.

Physicians are also using their smartphones to access clinical reference material and, in some cases, to access their EHR directly. Discussion of mHealth is beyond the scope of this series, but you can research it further by visiting www.mobih.org.

Electronic Medical Record (EMR)

Electronic Medical Record (EMR) is an electronic record of an individual's health-related information that can be created, gathered, managed and referred to by authorized clinicians and staff within a single health care organization.

It is very common for EMR and EHR to be used interchangeably; however, the critical difference to note is the interoperability of an EHR.

mHealth

mHealth is mobile health technology, a quickly growing area of Health IT. You can learn more from the mHealth Initiative at www.mobih.org.

Health Information Technology (Health IT)

Health Information Technology (Health IT) refers to the use of a variety of electronic methods for managing information about the health and medical care of individuals and groups of patients.

A Health Information Exchange (HIE)

A Health Information Exchange (HIE) is a local, state or regional system that facilitates the exchange of health information among EHRs and other HIEs. A nationwide HIE is being developed called "NHIN," which is an abbreviation for "National Health Information Network."

Electronic Health Record (EHR)

Electronic Health Record (EHR), is an electronic record of an individual's health-related information that conforms to nationally recognized interoperability standards and can be created, managed and referred to by authorized clinicians and staff across more than one health care organization.

Certified EHR Technology

Certified EHR Technology meets standards which are determined by the Office of the National Coordinator for Health Information Technology (ONC) which is part of the Department of Health and Human Services. A certified "Complete EHR" meets all of the requirements for a "Qualified EHR" and has been tested and certified in accordance with the certification program. A certified "Modular EHR" can be assembled by combining certified EHR modules so that together they meet all of the Qualified EHR requirements. Using the modular approach, a practice could implement ePrescribing, local hospital system connections, evidence at the point of care, disease registries and interactive patient Web portals without ever acquiring a Complete EHR.

Personal Health Record (PHR)

A Personal Health Record (PHR) contains health information for an individual. With a PHR, access to an individual's health information is controlled by that individual, which is different from an EHR. The PHR is separate from the physician's legal record.

ePrescribing Systems

ePrescribing Systems electronically transmit a new or renewed prescription to a pharmacy computer system.

Patient Registry

Patient Registry is a list of patients with a specific condition, such as diabetes, that tracks critical measures appropriate to that condition, allowing the practitioner to pro-actively manage the patient's care. Another use of the term "Registry" is to describe state or regional lists of individuals such as those who have received certain immunizations.

Health IT | Module 1 - Overview of Health IT

Let's discuss why EHR technology should be an important topic for you right now.

Health IT Timeline

Since 1996 the federal government has taken a number of steps that have dramatically affected Health IT. The most recent and most significant one is the American Recovery and Reinvestment Act, or ARRA, which was passed in 2009.

The Health Information Technology for Economic and Clinical Health, or HITECH act, is part of ARRA and authorizes incentive payments through Medicare and Medicaid to clinicians and hospitals when they use EHRs in a specific way known as Meaningful Use.

Through ARRA and the HITECH Act, the federal government is committing unprecedented resources to supporting the adoption and meaningful use of EHRs. Incentive payments of as much as \$44,000 (through Medicare) and \$63,750 (through Medicaid) per clinician are available from 2011-2016 for Medicare and 2021 for Medicaid. This funding is intended to provide support to achieve the creation of a nationwide system of EHRs used to improve overall U.S. health care quality and value.

As part of this legislation, the federal government also funded the creation of Regional Extension Centers, or RECs (pronounced “wrecks”). A REC's job is to help smaller primary care practices select and implement EHRs and achieve meaningful use.

1996 – HIPAA

The Health Insurance Portability and Accountability Act (HIPAA), established privacy regulations and required that standard transaction formats be used for the Electronic Data Interchange (EDI) of health care data.

2003 – Medicare Drug Improvement & Modernization Act

The Medicare Drug Improvement and Modernization Act of 2003 is generally known for establishing the Medicare Prescription Drug benefit, but it also promoted electronic prescribing standards.

2004 – executive order 13335 & National Coordinator of Health IT

President Bush issued executive order 13335 which called for the widespread adoption of interoperable electronic health records in 10 years. Later that same year, President Bush established the position of National Coordinator of Health IT and required the coordinator to report within 90 days of operation on the development and implementation of a strategic plan to guide the nationwide implementation of Health IT in both the public and private sectors.

2006 – Tax Relief and Health Care Act

The Tax Relief and Health Care Act required the establishment of a physician quality reporting system, which the Centers for Medicare & Medicaid Services (CMS) named the Physician Quality Reporting Initiative (PQRI).

2006 – CCHIT

The Certification Commission for Health Information Technology (CCHIT) certified the first EHR products.

2009 – ARRA & HITECH

The American Recovery and Reinvestment Act (ARRA) included the Health Information Technology for Economic and Clinical Health (HITECH) act, which authorized incentive payments through Medicare and Medicaid to clinicians and hospitals when they use EHRs in a meaningful way, as defined by specific measures.

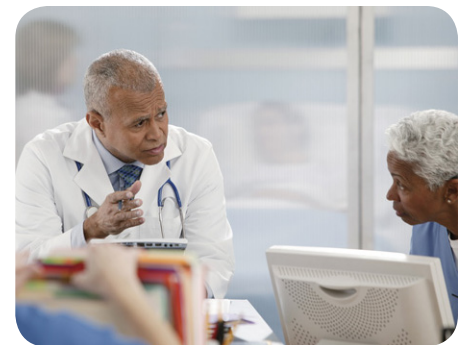
Meaningful Use

Meaningful Use is the name given to the rules issued by CMS that define the minimum requirements that physicians must meet through their use of certified EHR technology in order to qualify for incentive payments.

Regional Extension Centers (RECs)

Regional Extension Centers (RECs) were created by the HITECH Act. The Extension Program consists of a national Health Information Technology Research Center (HITRC), and Regional Extension Centers (REC). RECs provide education, outreach and technical assistance to providers in their geographic service area. They help practices select, successfully implement and meaningfully use certified EHR technology.

On-site technical assistance is a key service offered by the REC to priority primary-care providers, and represents a significant portion of the Regional Centers' activities.



Why Adopt an EHR Now?

At this point, you might be asking “Why is this all happening now? Can’t I just ignore it for a while longer?” The answer is yes, you can put off a decision, but delaying will have consequences including missed opportunities.

Certain government and private payer incentives require that you get started sooner rather than later to maximize payments for meaningful use. However, these incentives may or may not be pertinent to you depending upon your Medicare, Medicaid and private-pay volume. You need to calculate their potential value using your own practice data to determine their importance.

Your practice may be different, but in general, the incentives will be enough to defray a significant portion of the costs of an EHR. The quality and efficiency benefits of an EHR will help provide additional financial benefits while avoiding the prospects of reimbursement penalties that will apply to Medicare providers if they do not achieve Meaningful Use by the end of 2014.

Another fact to consider is that certain current and future reimbursement is going to require data that can only be provided by Health IT applications. Today, with an exceptional manual system, you can meet the Physician Quality Reporting System (PQRS) reporting requirements. Similarly, you can obtain Level 1 Patient Centered Medical Home (PCMH) certification without a certified complete or modular EHR. But as PQRS and PCMH reporting requirements become more extensive, satisfying them will require more and more elements of EHR technology. Similarly, competitiveness for insurance contracts and inclusion in emerging Accountable Care Organizations (ACOs) and simply being attractive to new patients will soon require more elements of EHR technology.

For these reasons, now may be an appropriate time to evaluate the acquisition of Health IT and to establish a project plan. The next module will help you consider that decision.

Module 1 Summary

We have reached the end of Module 1. Here are some things you may want to do as you continue through the remaining modules:

- Talk to peers who have recently implemented an EHR. Ask them what they did right and what they would do differently. Have them show you their EHR, highlighting the strengths and limitations they see in the system and their relationships to their vendor.
- Contact your REC and find out what services they provide in your area.
- Attend vendor demos via webinars or conferences.
- Talk to experts such as consultants or your local hospital to learn about the best vendors in your area.
- Implementing Health IT can help you improve the effectiveness of your practice and make caring for your patients even more rewarding. But obtaining these benefits requires careful planning and setting realistic expectations.

Physician Quality Reporting System (PQRS)

A voluntary reporting program, formerly known as the Physician Quality Reporting Initiative, that provides an incentive payment to identified eligible professionals who satisfactorily report data on quality measures for covered Physician Fee Schedule (PFS) services furnished to Medicare Part B Fee-for-Service (FFS) beneficiaries (includes Railroad Retirement Board and Medicare Secondary Payer).

Patient Centered Medical Home (PCMH)

Patient Centered Medical Home (PCMH) is a model for care provided by physician practices aimed at strengthening the patient-physician relationship by replacing episodic care based on illnesses and patient complaints with coordinated care and a long-term healing relationship.

<http://www.ncqa.org>

Accountable Care Organization (ACO)

Accountable Care Organization (ACO) is an organization of health care providers that agrees to be accountable for the quality, cost and overall care of Medicare beneficiaries—who are enrolled in the traditional fee-for-service program—who are assigned to it.

<https://www.cms.gov/sharedsavingsprogram/>

Health IT | Module 2 - Practice Needs Assessment

In this second module of the series, our goal is to help you select and plan for the implementation of EHR technology in your practice. If you are not sure whether you are ready to proceed, you may want to complete a [“readiness assessment.”](#)

Workflows in Present and Future State

The first step in the process is to understand how your practice currently works (we call that the “present state”), and then to conceptualize how your practice will function with an EHR in place (the “future state”). The goal of this [“needs assessment”](#) is to understand your practice and its needs well enough to maximize the positive impact an EHR can have while minimizing the risk of negative effects.

Implementing an EHR will impact your practice significantly. Appropriately configured, implemented and used, an EHR can help you improve clinical workflows, patient flow, services delivered and care efficiency. It can support more effective interactions with patients, families, providers and staff as well as with outside practices and other organizations.

If you haven’t already done so, you should research EHRs by reading, talking with colleagues and meeting with vendors. Use this knowledge to analyze the impact of an EHR on each process in terms of staff time (work hours), materials (like file folders) and physician time.

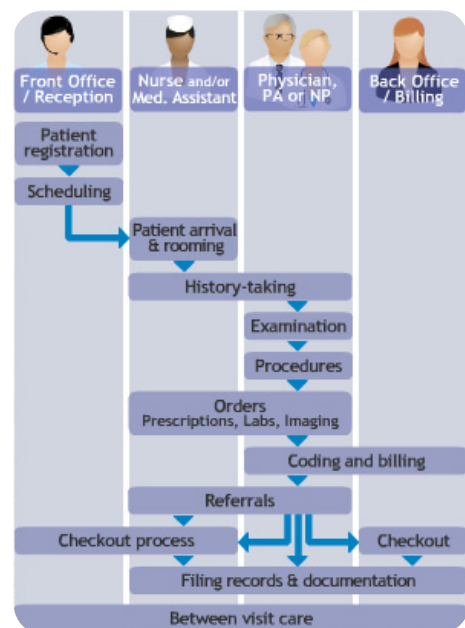
You’re not likely to have time to study all of the potential changes in minute detail, so you will need to focus on the specific processes that will be most significantly impacted by EHR technology. A good way to do this is to systematically consider each of the twelve major medical office processes listed here in the [workflow diagram](#).

You may find that an EHR will cause you and your colleagues to spend more time documenting each visit. This is because you will need to enter more of your findings in structured data fields. It may also take you and your staff longer for some visits because the EHR reminds you to address certain additional care needs. But these “time investments” may also can generate pay back such as:

- Meaningful use payments
- Better quality
- Revenue associated with delivering additional services
- Increased payments due to more accurate billing and coding.

An EHR can virtually eliminate the time currently spent looking for, pulling and handling charts. It can also improve efficiency in handling medication renewals, referrals, test results and in taking and following up on telephone messages.

You will need to understand and quantify these time savings and benefits as you plan your new workflows.



ePrescribing

With ePrescribing renewal requests can come in electronically and can be responded to electronically. Often your staff can complete the request under protocol for chronic medications.

Tracking Outcomes

By tracking patient outcomes for defined disease categories you can improve your own practice quality and become eligible for various incentives and grants. This requires the capture of discrete data elements whenever possible.

Better Patient Communications

An EHR-linked patient portal with secure messaging allows you to exchange emails with patients. EHRs can provide a secure method to share patient data electronically with patients—and with fellow physicians—inside and outside of your practice.

Workflows - Documentation

As part of the needs assessment, it is important to understand your current documentation practices. Do you use dictation? Do you capture discrete data, perhaps by using a stand-alone registry system? What are your needs and objectives as far as documentation?

The effective use of an EHR presents a tremendous opportunity to improve documentation quality, improve communication, capture discrete clinical data to inform decision support and quality reporting, and facilitate information organization and access for future care needs. The use of EHR documentation templates, whether narrative or graphical, can facilitate documentation and minimize your need to type or dictate. This will make more information available for internal use such as, for example, retrieving your last Review of Systems with a single click. The information will also be available for internal or external quality reporting.

Having structured documentation templates also makes it easier to have your staff enter patient history and exam findings for you. This can help reduce the amount of information that you and other providers need to enter. Capturing more elements of history, examination and medical decision-making can help optimize your coding accuracy, decreasing under-coding and improving practice income.

Dictation

Practices wanting to replace their present use of dictation or longhand note writing may consider using voice recognition to dictate directly into the EHR or use of an interface to import dictated notes. While making for an easier transition away from the paper chart, this may result in less discrete data to assist in reporting. Both result in free-text data, which is not discrete or structured, and hence is not available for reporting. In addition, becoming an accurate and efficient user of voice recognition software can be challenging.

Some practices choose a blend of options, using voice recognition to enter limited free text and also entering specific, targeted data via a template. Consider your options carefully and, while narrative documentation may not be the best use of your EHR initially, you can adopt more discrete data entry as you become more comfortable with your EHR over time.

EHR Benefits

Digital Format

One benefit to adoption of an EHR is the potential to replace or significantly reduce the use of paper charts. This will improve access to patient information by allowing simultaneous access to clinical records by staff and physicians; as well as fewer delays waiting for or looking for a paper chart. Most EHRs will also allow physicians to access patient records remotely. This may give you access from the hospital, from home or from a mobile device.

Additional benefits you may obtain from your new EHR are shown here:

Competitive Advantage

More and more practices will implement EHRs over the next several years. Patients, physicians and staff members will begin to expect a practice to have an EHR and will begin to prefer practices that are electronic over those that are not.

Disaster Recovery

With proper EHR backup procedures, you can store a copy of your data in multiple locations providing safety that you could never obtain from a room full of paper charts.

You may also identify practice-specific benefits not shown here.

Once you complete your needs assessment, you will have a much better understanding of what is important to you and your practice. You will know which potential benefits are critical, and which are less important. You will also have a better understanding of the costs and benefits you can expect to incur in terms of staff and physician time. This will help you identify the specific processes that you want to automate first, and others you may want to preserve or put off until later.

We have reached the end of Module 2. As you prepare for Module 3, consider the following steps.

1. Identify vendors who have been successful in your area.
2. Talk with colleagues who have implemented health IT in your area. They can be the best sources of information for what you should expect when implementing EHR technology. Your local hospitals and regional extension centers may be useful sources of information and may provide special deals for purchase, service and support. National and specialty physician associations may also offer additional guidance.
3. Sketch out a high-level project plan so you can begin to set timing and cash expenditure expectations for yourself and your staff.

Armed with your needs assessment, you are now ready to approach vendors with facts and clear expectations. Don't be afraid to share both as you proceed through the process defined in Module 3 – EHR Selection.

Health IT | Module 3 - EHR Selection Considerations

This is the third of six health IT education modules focusing on the selection and implementation of an EHR for practices with 10 or fewer physicians.

In this third module we help you make your selection decision. As you begin your selection process you will need to consider several attributes of EHRs, including software and hardware, as well as estimate the effect each EHR option would have on the staffing and finances of your practice. It typically takes several months to collect this information and to select your preferred vendor or vendors.

After your decision, it could take another month or more to negotiate a contract. You should work with the vendor(s) during the contracting process to understand what the implementation process will look like.

Your first step should be to prepare an “evaluation matrix.” This matrix can be on paper or in an Excel Spreadsheet or a Word document. Several examples can be found on the internet by searching for “EHR Evaluation Matrix.”

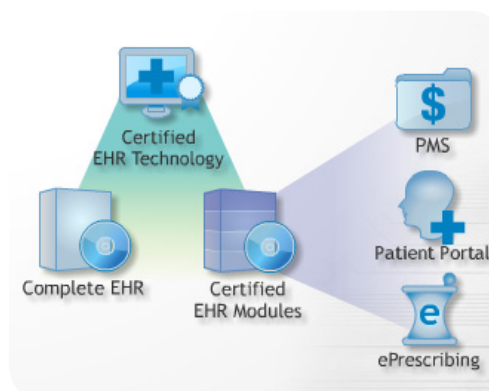
Most evaluation matrices are arranged with your favorite EHR options listed across the top and EHR attributes listed vertically down the page. In each cell you will rate each EHR option by how closely it fills your specific needs. In this module, we will discuss the key attributes you will need to consider, starting with software.

Choosing EHR Software

Which approach to EHR software will be best for you? When answering this question, be sure to consider both modular and complete EHRs. Find out what it will take to integrate any potential EHR with your practice management (or billing) system (PMS), and consider any specific requirements of your specialty or subspecialty.

There are significant advantages to acquiring “certified EHR technology”. You can attain that level of functionality by acquiring a “complete EHR” or by acquiring several certified modules, which together perform all of the requirements for complete certification.

One size does not fit all practices. Much depends on your current health IT use, your readiness to adopt additional technology and your assessment of the workflow and financial implications of EHR adoption. However, if you are already happy with your PMS and other components, such as ePrescribing, you may consider adding modules rather than replacing what you already have in place. Modules can meet all the requirements for meaningful use and may be the best choice for some practices. Other practices may wish to make the move to a single, complete system now so that they can achieve the full benefits of replacing the paper chart as early as possible.



Process and Timing

Collecting the information you need to select health IT technology for your practice can take several months. You may want to assemble a team from your practice to help with the process. Part of the process will include visiting practices that have already implemented an EHR. Visiting a colleague's office may be the most useful way to learn about the problems and benefits associated with implementation. Most vendors are happy to arrange a visit to practices that serve as examples of successful implementations of their product. Also, your REC may be willing to arrange site visits and vendor demos for local practices.

Certified EHR Technology

CMS states that certified EHR technology is either a: Complete EHR that meets the requirements included in the definition of a Qualified EHR and has been tested and certified, or a Combination of EHR modules in which each constituent EHR module has been tested and certified and the resultant combination also meets the requirements included in the definition of a qualified EHR.

Certification

Certification of health IT will provide assurance to purchasers and other users that an EHR system, or other relevant technology, offers the necessary technological capability, functionality, and security to help them meet the meaningful use criteria established for a given phase. Providers and patients must also be confident that the electronic health IT products and systems they use are secure, can maintain data confidentially, and can work with other systems to share information.

<http://healthit.hhs.gov>

The official Certified Health IT Product List (CHPL) including Complete EHRs and EHR Modules is found at <http://onc-chpl.force.com/ehrcert>

Health IT | Module 3 - EHR Selection Considerations

It is important to consider the integration of any potential new health IT software with your current PMS. If you are considering a new PMS, this is a good time to look at vendors that offer combined or integrated PMS and EHR technology. If you choose separate vendors for your PMS, EHR or other health IT modules, you will need to carefully examine what it will take to make sure these separate systems can “talk to” each other. If they can’t share data (known as “integration” or “interfacing”) then you and your staff may need to perform duplicate data entry and generate reports from separate systems. Whether interested in a single, complete EHR or a modular approach, you should discuss how data will be shared with your existing health IT.

You may want to consider using the software and infrastructure of a trusted organization you do business with today, such as your local hospital or physician organization such as an IPA . Adopting their EHR can prove advantageous in terms of efficiency, system reliability and cost of implementation. However, systems adopted by your hospital or another physician organization may or may not meet the needs of your practice. You should rely on your readiness assessment and evaluation matrix to determine what system will best meet your needs.

Another consideration is your specialty. Some vendors may have richer content, such as progress note templates or decision support logic, specifically designed to support your specialty, subspecialty or special area of interest. Talk to your colleagues, consultants and your professional associations to find a short list of vendors that are best suited to your practice.

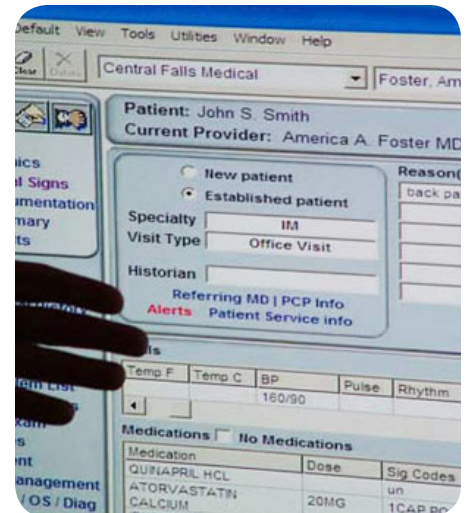
Practice Management System Options

If you are upgrading or implementing a new practice management (billing) system (PMS), implement it first before your EHR. Allow a minimum of 60 days (two end-of-month closes) before moving on to the EHR implementation. During those 60 days you can be building the EHR.

When you do implement your new PMS, consider keeping your old system running until the open accounts on the old system are collected.

What about Look and Feel?

If you have several vendors that you like and each has a certified, complete or modular EHR product that addresses your needs, then it's time to consider your preference for look and feel. Focus on the elements that you will use the most. You will spend a lot of your time using your EHR, so form, fit and function do matter!



EHR Hardware

There are three primary categories of hardware that are required for an EHR: Client computers (laptops, desktops), servers (for databases, applications, interfaces) and devices (printers, scanners, cameras).

All EHRs require all three of these types of hardware. The most critical choice is which of the three hosting options to select:

Self-hosted

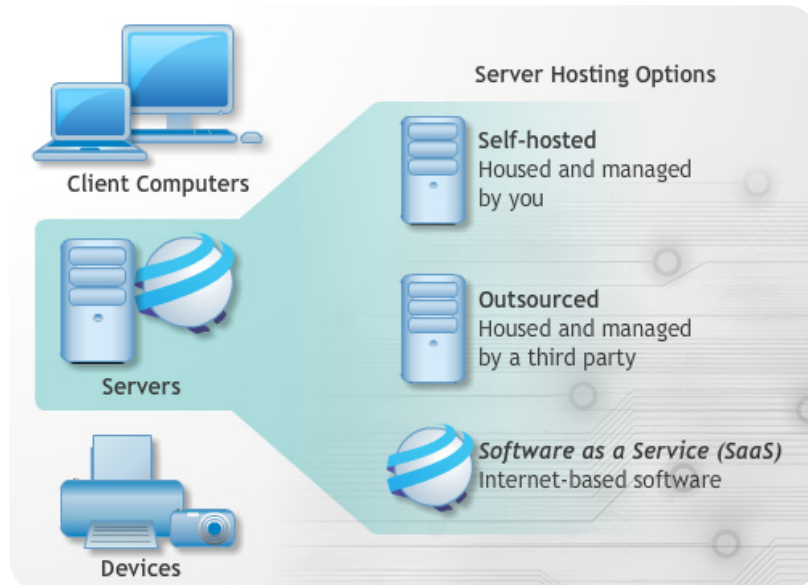
The server(s) are housed on your premises and managed by you.

Outsourced

The server(s) may or may not be purchased by you and are managed by a third party, often called an application service provider (ASP). The server will reside at the ASP location, typically a data center, and be accessed over a private network or the Internet. The ASP may offer additional services such as software support, data backup and disaster recovery. Your vendor may offer these options or have a partner that does.

Software as a Service (SaaS)

This option refers to an increasingly popular delivery model for small to medium size practices where you access your software through the Internet. In this model you simply use the software as a service and you do not maintain, update or own the software itself. Each of these approaches has its pros and cons noted in the right-hand column.



EHR Staffing Impact

Each software and hardware option and each vendor and implementation option will have an impact on your staffing requirements. Your EHR technology may require more staff or less staff and more or less physician time in each of the key process areas. Use your needs assessment (Module 2) to evaluate the staffing impacts of each EHR option and use staffing cost as part of your financial analysis.

Self-Hosted

Pros

- Servers and data completely under your control
- No or minimal connectivity required; fast response time
- Software decisions completely up to you

Cons

- Servers are subject to your practice environment (power outages, coffee spills, other accidents)
- Requires discipline to maintain backups and procedures for disaster recovery
- You buy the EHR and operating system licenses and you supply the hardware and software
- It is your responsibility to maintain operating system and application software patches and upgrades and add devices as required
- More demands on practice staff
- Potentially higher total cost of ownership

Outsourced

Pros

- Servers safely located in a secure data center
- Still have control over software and its functions and features
- Multiple options for support

Cons

- Requires continuous connectivity between your practice and the data center
- You still buy the EHR and operating system licenses and you may still supply the hardware and software or pay an additional monthly fee
- It is your responsibility to maintain operating system and application software patches and upgrades

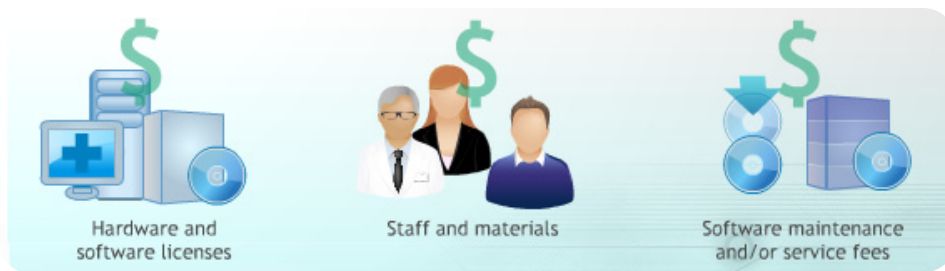
Software as a Service: SaaS

Pros

- No servers to worry about
- You subscribe (typically a monthly fee) rather than pay for a license to the software; software maintenance or upgrades are taken care of by the vendor
- Fewer customization options; less time spent deciding
- Minimal hardware to install; just what you need to access the software over the Internet
- Fewer demands on practice staff
- Potentially lower total cost of ownership

Cons

- Requires high-quality Internet access; no local data
- May have limited customization options
- Dependent on vendor support



The cost to acquire an EHR is lower than ever before, but the potential financial impact on your practice is still significant. Assessing the specific financial impact of each EHR option is a critical part of your decision process. It requires you to assess both capital costs, such as hardware and software licenses, and ongoing expenses such as staff, materials, software maintenance and service fees. You need to estimate these costs over a several year period to get the full picture. This is called your “total cost of ownership”.

Each EHR option will also have some positive cost savings and revenue improvement implications. Consider the following:

1. Configuring and using your EHR properly can improve practice efficiencies and help decrease per-provider practice operating costs (personnel, supplies and services).
2. Medicare or Medicaid incentive funding is available to offset some of the cost of purchasing an EHR.
3. Another physician organization such as a hospital system in your area may be able to offer discounts on health IT that may meet your practice needs
4. With the new government initiatives, some states are offering low interest loans. Grants may also be available from local foundations to help physicians acquire EHRs. Some vendors are also offering low- or no-cost financing.
5. In some states the local REC may have negotiated a discounted rate for EHR software and implementation services. Even if you do not plan to apply for the meaningful use incentive, this pricing may be available to you.

Once you have completed your EHR evaluation matrix, take a minute to review your findings. Check your ratings to make sure they seem reasonable. Review your completed matrix with your partners and others whose opinions you trust. Rule out obviously weak options then take a deep breath and make your decision. If there is a strong second choice, don't rule out that option until you have completed your contract with your number one choice. Sometimes things change during the contracting process and it is always good to have a high-quality second choice option.

We have reached the end of Module 3. In this module we have highlighted the key considerations for selecting an EHR product. In the next module we will address planning for the EHR Implementation.

What is the cost of an EHR?

“...We determined that the average costs for initial EHR systems currently can range from \$25,000 to \$54,000 in the implementation year, per professional.”

Federal Register, V. 75, No.8

“...Costs related to maintenance could be as low as \$3,000 to \$9,000 per provider, where other studies state that maintenance will be as high as \$18,000 to \$20,610 per provider.”

Federal Register, Volume 75 Issue 144

A survey of eight complete EHRs by the Maryland Health Care Commission showed: Average initial cost for a solo physician was \$27,074 (minimum was \$1,995 and maximum was \$53,483). The ongoing annual cost average was \$7,346 (minimum \$995 and maximum \$9,900).

The above are often quoted as the cost of acquiring a single, complete, EHR system. Similar figures for modular, certified solutions are not generally available but could be lower.

Total cost of ownership

A total cost of ownership or “TCO” analysis is a method of determining the lifetime costs of acquiring, operating and changing something. TCO analysis often shows there can be a large difference between the price of something and its long-term cost. As you evaluate proposals from multiple vendors, prepare a cost comparison including staff time spent:

- Supporting servers and/or software (depending on the implementation model you choose)
- Designing data entry templates, letters or forms
- Learning how to use new features
- Creating practice-wide procedures for using the software to insure data quality and maximize efficiency

This will help you to reach a realistic understanding of the effort and overall expense.

Health IT | Module 4 - Implementation Planning & Preparation

This is the fourth of six education modules designed to provide smaller practices with an overview of health IT and offer guidance in decision making. In this module we explain how to plan and prepare for an EHR once you have made your selection decision. This module focuses on implementing a complete EHR, but many of the principles described here will apply to implementing the various components of a modular EHR.

If you are implementing a modular EHR, you will have more flexibility with respect to sequencing your implementation, but it will be important for you to plan ahead regarding the flow of data between each of the EHR modules. We recommend that you complete this education module no matter which approach you have selected.

One of the most common mistakes with the installation and ongoing operation of any health IT product is failure to invest enough time and attention into detailed planning. While your vendor will help, many of these activities, including preparing the overall plan, will be your responsibility. Be sure to complete the EHR Implementation Checklist and review and update it throughout the implementation.

To develop an implementation plan and prepare for implementation you will need to allocate staff resources. There are three primary roles you will need to assign immediately:

- Lead physician
- Project manager
- Analyst (Note: For a very small practice the analyst's tasks may be assigned to the project manager. For larger practices you may need to assign additional people to assist the analyst.)



Roles

The role of the lead physician is to guide the organization through the implementation process by exhibiting strong, decisive leadership; removing or resolving obstacles for the project manager; and serving as a role model for the other providers in the adoption of the EHR.

The role of the practice's project manager is to work with the vendor and other team members to complete the project on time and within budget. The project manager keeps everyone focused on timelines, tracks progress and manages the day-to-day issues that arise as a normal part of an implementation.

The vendor will also assign a project manager. His or her role will not be the same as your project manager, but the two will need to work together. The vendor's project manager will manage the vendor's resources and will coordinate the vendor's efforts with your efforts.

When you or your project manager have specific questions or needs, the vendor's project manager will address them. Frequently, practices are surprised to find that the vendor's project manager is not as proactive as they expected. You should expect that your vendor will look to you to define what you need and when you need it.

The "Build"

Building an EHR means entering the data and configuring the software so that it fits your specific practice. Develop a list of build elements external to the system and have this list approved before building begins. Your list will probably include:

- Demographics (imported from PMS)
- Computerized Order Entry (CPOE) orders
- Treatment regimens/protocols
- Medication management settings
- Standing orders
- Default patient history settings
- Billing/chart master (update with new codes)
- Consents

Work with your vendor to learn the interrelationships of the various elements; creating lists that do not relate properly will lead to rework.

Complete a site visit to a similar practice using your EHR to learn how they did their build and what they would do differently.

Role Description

The lead physician is sometimes known as the "physician champion." The analyst is sometimes known as or becomes a "super user."

You will need to assign someone from your practice to become your analyst. The analyst configures the software and develops and documents the revised workflows (which may also be called "standard operating procedures"). You may need to assign one or two staff people to help the analyst create the templates, order sets and various other lists that will need to be loaded into the EHR as part of the "build" process.

Usually the person assigned as the analyst becomes the practice's in-house expert or "super user." The super user is the first point of contact when there are questions within the practice, and he or she frequently trains new staff members on the software. Consider this possibility and make sure your analyst receives the proper training.

Training for Software Configuration/The Build

During the planning stage, it is common for the project manager and analyst to travel to the vendor site for training. The training they receive should cover how to build and use the software.

Immediately after training it is a good idea to visit a similar practice with a mature implementation of your specific EHR. Even if you visited other practices as part of your selection process, consider doing another site visit at this point. This helps you understand the overall system flow and will help you visualize how your new EHR will impact your practice.

System Build

The specific tasks that you will need to perform for the system build depend upon the type of EHR that you have selected and on your vendor's requirements. An Internet-based EHR will have the least hardware requirements but each computer or handheld device will need excellent Internet connectivity. With hosted and practice-based EHRs, you will need to acquire and install the vendor-specified hardware.

Hardware

The first thing you will need to do is to implement the hardware infrastructure (server and network). If you already have a network, you may need to upgrade it. You may also want to add secure wireless routers for wireless connectivity. Most practices contract with an IT services company to assist with the installation of hardware and cabling. Your EHR vendor and your IT services company will help you find the right equipment at the best possible price.

Software

After your vendor loads the EHR software onto the server you will need to build your templates, order sets and lists of tests as well as various other lists. The build takes place with any type of EHR technology, but is less involved with an Internet-based modular or complete EHR and more involved with a complete EHR, in which the server is located in your practice. Note that an Internet-based EHR is more commonly referred to as a Software-as-a-Service (or SaaS) model EHR. The EHR technology could be either a complete, single source application or a combination of modules functioning together as a complete EHR. SaaS means that the software was created for the Internet and is intended for use by multiple, simultaneous users. Regardless of approach, it is important to have an organized process. You will need to assign a qualified person to review and approve all content before it is deemed ready to use.

Data Preload

Before you go live, you will need to load demographic data for all patients from your PMS or billing service. Also, most practices enter certain basic data into the EHR for about 20% of patients—those with chronic illnesses, those with an upcoming visit in the few months, and those with a history of several visits in the past year. Preload these patients' active problem list, medication list and allergies. Some practices also add data from the most recent occurrence of diagnostic studies such as ECGs, mammograms and colonoscopies. Create a checklist of each item to be entered to ensure that all items have been collected.

Procedures & Workflow Analysis

In module two, you analyzed your existing manual workflow and determined in general how it would change with an EHR. Now that you have selected a specific EHR you can get much more detailed with your analysis. While the hardware is being ordered and the build information is being prepared, the analyst should be preparing more detailed workflow documents that reflect the specific flow of patients and information specific to the way that you plan to implement your EHR.

For example, a process that now uses manual logs may be automated by your new EHR. This workflow change will lead to changes in who is managing the process and when it is performed. If you move forward with the implementation without understanding this change in timing and responsibility you may experience confusion when you implement. This confusion can result in extra stress and dissatisfaction among physicians, staff and patients.

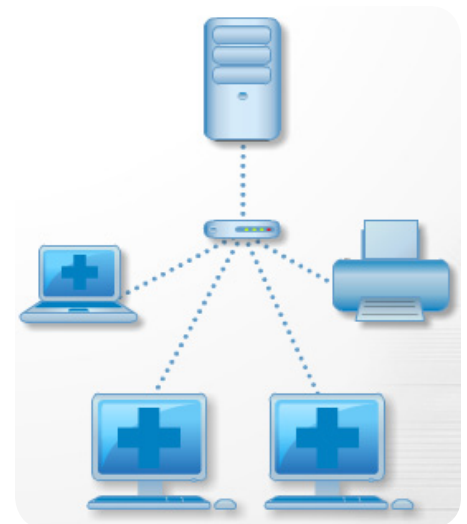
We have reached the end of module 4. In this module we have discussed the elements of planning and preparing for the implementation of an EHR. In the next module we will address the implementation itself.

IT Services Company

Many practices hire an IT services company to supply, install and troubleshoot their computers, printers, local area network (LAN) and routers. Look for a company that operates a 24/7 emergency number and is available to solve both hardware and software problems. Ideally, this company will be able to monitor your systems remotely and detect problems before they become critical. This company is typically separate from your EHR vendor and may not even specialize in the health care industry. The key is to select a reputable, reliable company with enough employees to make sure that someone is always available.

Templates

A template is an electronic form usually taking up one or more computer screens which is used to collect data about the patient usually at the time of an encounter. Different EHRs may call these by different names and provide varying levels of flexibility in choosing, sequencing and designing templates



Health IT | Module 5 - Implementation Planning & Preparation

This is the fifth of six education modules. Here, we provide you with suggestions that will help you be more successful with your EHR implementation. We will focus on implementing a complete EHR, but many of the principles described here also apply to sequential implementation of EHR modules.

Implementation Approach

Implementing a complete EHR, or key EHR modules, forces significant changes in the way that a practice does business. The lead physician, in consultation with the project manager and vendor, must decide if the software will be implemented in stages or if it will be implemented all at one time.

If you are opening a new practice, or a new site for an existing practice, you will most likely want to implement all of your EHR components at the same time. If you are implementing an EHR at an existing practice, you will have to decide whether to implement all at once, or use a phased approach

There are many ways to phase in the use of your EHR. Consult with your vendor and similar practices that have already gone through the process for tips and best practices. Ultimately, the approach that you use will be up to you. The key is to think it through and to have a written plan. Take the time to think about what might go wrong and to develop contingency procedures.

If you decide to phase your implementation, make sure you have a plan to help you keep on track without getting bogged down. The longer it takes you to achieve full implementation, the longer it may take to realize the quality, efficiency, cost and other benefits of your EHR

Staged Implementation

One of the decisions you need to make is whether you will immediately start using the EHR for all of your patients, or whether you will start with a subset. Your answer will depend on the characteristics of your practice and on what elements or modules of the EHR you implement and at what time.

Certain practices may only implement certain visit types at first. For example, if you see obstetric patients, you may decide to use the EHR only for new patients. If you are a specialist with a large volume of new patients, and a short-term relationship with most patients, then you will likely begin by using the EHR for only new patients.

Physicians in primary care practices such as family practice, pediatrics and internal medicine may choose to begin with new patients and then move on to enter existing patients as they make appointments after your go live date. One way to approach this task is to attach a form to the paper chart outlining what data needs to be entered into the EHR before the patient's visit. Consider pre-loading certain data elements. Once a patient has an electronic record, you should always use it for each subsequent visit.

Typical Staged Implementation

Step 1 Data Preload

Step 2 Workflows & Orders

- Physician orders
- Medication lists
- ePrescribing
- Labs
- Diagnostic tests
- Procedures completed by staff such as injections and casts
- Chief complaints
- Histories
- Vitals
- Procedures
- Phone messages
- Referrals
- Lab interface

Step 3 Physician Visit Documentation

- HPI, ROS, exam
- Assessment and plan
- E&M coding
- Electronic superbill

Data Elements for Preload Consideration

- Patient Pharmacy (pre-load in PM Patient>Other)
- Problem List (any claims billed in PM are loading this already)
- Medications (can pre-load or obtain some from PBMs)
- Allergies (can pre-load)
- Past Medical, Family & Social History – new form or entering old data
- Immunization History
- Patient Registries
- Specialty Needs - Examples to consider for scanning:
 - Pediatric practices: growth chart
 - Cardiology practices: INR tracking
 - Pregnancy history (OB/GYN)

Certain functions should always be implemented all at once. When you activate electronic prescribing (ePrescribing), you should ePrescribe for all patients, not just a selected group. When you enter referrals, enter all referrals into the EHR so that the referral coordinator is not dealing with two incoming information streams. The same approach is appropriate for telephone calls.

Should the schedule be trimmed to support your go-live? If you generally have a full schedule yes--you will need to accommodate some type of schedule reduction. How much of a reduction will depend on how much functionality you are implementing at one time, how well you are trained, how much you practice before you go-live, and how well you have configured your system to help you use the EHR effectively during a visit.

EHR Implementation and Your Patients

How will implementing the EHR affect your patients? You will want to explain to your patients that you are implementing a new system to help you provide them with the highest quality care. Ask for their understanding.

Do this verbally as well as providing patients with informational brochures and placing signs in your office. People are surprisingly supportive of you as a new learner and they are often interested in the EHR, especially when they understand that your purpose is to use information technology to improve their care.



Potential Productivity Reduction Estimates During Go Live

50% reduction – weeks 1 and 2
30% reduction – weeks 3 and 4
15% reduction – weeks 5 and 6

The actual reduction experienced by each practice will vary significantly. Studies published in such publications as *The American Journal of Medicine and Health Affairs* reported productivity loss ranging from none to 20 percent. Other case studies have cited higher percentages of productivity loss—up to 50 percent in the initial stages of implementation.

Revenue losses from reduced visits during training and implementation averaged \$7,473 per FTE provider, ranging from none (in two practices) to \$20,000 per FTE provider in one practice. Losses depended in part on the extent to which providers worked longer hours initially instead of reducing patient visits.

Miller et al. "The Value of The Electronic Health Records in Solo or Small Group Practices." *Health Affairs*, 24, no. 5 (2005): 1127-1137.

Based on our experience, we modeled the induced costs of temporary loss of productivity using a decreasing stepwise approach, assuming an initial productivity loss of 20% in the first month, 10% in the second month, and 5% in the third month, with a subsequent return to baseline productivity levels. Using the average annual provider revenues for our model patient panel, this amounted to a revenue loss of \$11,200 in the first year.

Wang, et al. "A Cost-Benefit Analysis of Electronic Medical Records." *The American Journal of Medicine*. April 2003.

Paper Charts

What should be done with the paper charts for established patients? Different EHRs offer different capabilities. Some support scanning of patient charts as well as adding discrete data.

In general, it is not worthwhile to pre-scan or manually enter data from all of the patient charts that you have stored in your filing room. A more selective approach should be used.

Some practices expend effort on scanning charts but never end up accessing the scans. Scanning does not record discrete data elements and so is of limited value for population management and quality initiatives. If you feel a narrative description is important for the patient's ongoing record, one approach is to have your staff help you select an appropriate set of charts and then you can dictate a summary note for each and have your staff enter it into the patient's electronic record.

If you decide to scan your charts, only enter chart data for those patients who are likely to return to your practice for future visits. The least labor intensive approach is to scan charts only in advance of the patient's first visit after EHR implementation.

Also, rather than scan or enter data on the full chart, your practice should establish a protocol:

What should be keyed in as structured data?
What should be scanned?
What can be skipped?

Most practices will not discard charts immediately. If you decide to store charts off-site, make sure you can retrieve them if needed. Create a records retention policy in compliance with state and federal law and then scan and store or destroy in accordance with your policy. In many cases, you will need to store paper charts in some format (offsite or digitized) for several years.

Health IT | Module 5 - Implementation Planning & Preparation

Now let's walk through how a typical practice might implement EHR technology once the IT infrastructure is in place and once the EHR has been installed, configured and tested.

Step 1: Training

Vendors offer varying levels and types of training for your staff ranging from books and online manuals to on-site classroom instruction. Of the methods offered by your vendor, you will have to decide which is best and most affordable in terms of cost and staff time. Once the users have been trained, make sure that the adequacy of their skills has been verified.

Step 2: Workflows & Orders

After Step 1 is complete you are ready to go live. The go-live period starts when you see your first patient using the EHR and ends when all components of the EHR are live and in use, and you are using the EHR to interact with most patients routinely during and between visits.

The time period required to go live usually ranges from two weeks to a month, although it can be longer, especially if the implementation is phased. It is critical to have as much support as needed during the first few days of the go-live period. If possible, have a vendor representative on site. If that is not possible, designate a qualified team member to provide support.

Do not hesitate to call the vendor whenever you have an important question that you or your staff cannot answer. The goal should be to quickly address questions and resolve technical, user and workflow problems, and also to avoid developing bad habits of EHR use during the critical early days in which EHR "muscle memory" is being developed.

Going live is inherently stressful. It is an important time to provide morale boosts. Do small things for your colleagues and staff like providing lunch or coffee. Take the time to compliment those who are doing well and offer support to those who seem to be struggling.

Most practices pick a date to go live and on that day, they start using the EHR for most if not all EHR functions.

That means that for every patient that is seen, the intake person (typically a medical assistant or registered nurse) uses the EHR to document chief complaints, histories and vital signs. Then later, while with the patient, the physician uses the EHR to review and confirm these entries.

If labs or other diagnostic tests are ordered, they are entered into the EHR by the nurse or physician. If available, a lab interface is used to transmit and receive lab orders and reports. The EHR is then used to review and file lab results when they are received.

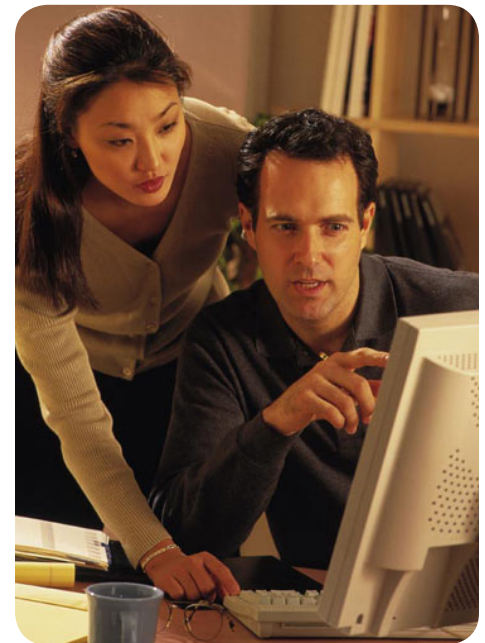
Prescriptions are also entered and transmitted to the pharmacy via ePrescribing functionality. Procedures completed by staff such as injections or casts are also entered, as are phone messages and referrals.

Training

If onsite training for all staff is available and is financially feasible you should take advantage of it and give it your full attention. Either block out days where you will not see patients or do the training after hours. The amount of time required to complete the training will vary based on the specific product and how much of it is being implemented. For a complete EHR, a total training time of 20-24 hours for each physician is common.

It is important not to wait too long after training to implement your EHR. You and your staff will forget what you learned if your new skills are not put into practice quickly. Supplement vendor-conducted training with information on your workflows and how they will be changed by implementation of your EHR.

Have your analyst present the new workflows to everyone in the practice, then have an open discussion about how they will change and how they will affect physicians, staff and patients. Also have the project manager present and review the project plan.



Step 3: Physician Visit Documentation

If the practice has decided to phase in visit documentation, now is the time to begin using the EHR to document progress notes, HPI, ROS, assessment, plan and procedure notes.

We have reached the end of module 5. In this module we have addressed implementation of your EHR. The next and final module describes how your practice will change with your EHR in place, and how you can take maximum advantage of your EHR's benefits while avoiding common problems.



Voice Recognition

Voice recognition technology used in combination with your EHR can combine the benefit of structured data entry along with the convenience of dictation. Additional information is available from many sources including the American Health Information Management Association article referenced below.

http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_022107.hcsp?dDocName=bok1_022107

Implementation Options

Advantages of implementing all at once

1. Helps you get through the whole process; reduces the likelihood that you will get stuck halfway
2. Gets it over with more quickly; less tiring
3. Less confusing; operating during the implementation process with half paper and half electronic is more complicated

Advantages of implementing incrementally

1. Reduces productivity loss due to problems making the change
2. Isolates implementation pain to whichever function you are implementing at the time
3. Allows time to fix problems with the workflow as they arise

Different Approaches to Incremental Implementation

If you decide to implement incrementally, there are several different approaches

you can use. Here are some ideas:

1. Start with one patient on the first day. Take that patient all the way through the workflow from intake to check out. The next day take a few more patients through the process.
2. Start with an enthusiastic physician on the first week. The second week, add another physician, physician assistant or nurse practitioner. Eventually all of the providers will be using the system.
3. Start with a specific module or function, like prescribing or the registry or visit documentation. By handling one area at a time you can master that area and then move on.

None of these approaches is perfect, so consider each and decide which, if any, makes sense for your practice.

This is the last of the six education modules. In this module we will help you understand what life will be like after you have implemented your EHR.

First of all, it will take a while to get used to this new way of doing business. Expect that some things will go wrong, that you will need time to address these issues, and that you and your colleagues and staff will be confused or even frustrated from time to time. This is natural whenever you make a big change like this. Try to stay with the system even if you run into problems.

If you run into a major problem and have to partially or even completely revert to your old manual processes for a while, it's not the end of the world! Resolve the problem and get back to using the EHR for that process as soon as possible.

Basic EHR Support and Maintenance

General Software Support

Certain new tasks will now become part of your normal day-to-day business. These are important to keep your new EHR in good working order.

You will want to continuously review and improve your EHR-related processes and procedures. Formalize this by asking for written input from your staff. Keep track of suggestions for improvements in a special list and make this list visible to your staff. Encourage their review and comments.

Also, remember that any changes you make to the EHR will affect others, so be sure to have a process for considering, implementing and notifying stakeholders whenever you or your vendor make any changes.

One often neglected but critical area is the need to develop and continuously update your EHR downtime procedures. You and your staff need to know what to do when the EHR is unavailable. Remember that your downtime procedures may need to change as you make changes to the EHR.

From time to time you will need to get help from your vendor. There may be a software malfunction, or you may have made an error from which you are unable to recover. In these cases you will need to open a support ticket with your vendor. Get to know their support process so that you can manage their performance as well as your own expectations. Try it out with smaller incidents so you know how to use it when something serious happens. Create a log book of problems as they arise and the solutions you used. Track each problem type in the table of contents or index for easier trouble-shooting in the future.

Vendors periodically release system patches and upgrades. Depending upon the type of EHR you have, and on your service contract, your vendor will instruct you on how to apply these changes or may even do it for you. This process may or may not require system downtime or retraining of staff.

EHR and Quality

Now that you have implemented your EHR you should be aware that just having an EHR does not automatically improve your quality of care.

Your EHR provides you with timely access to patient's health information. You can use it to track patients' health over time and report on whether they are receiving guideline-recommended care. You also have access to decision-support rules that you can use to improve your care process.

Now you should learn about and consider participating in quality improvement projects such as the Patient Centered Medical Home (PCMH), Physician Quality Reporting System (PQRS) or other local programs to take full advantage of your new capabilities.

<http://www.slideshare.net/dbeemsigne/catchit-the-relationship-between-electronic-health-record-use-and-quality-of-care-over-time>

http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_033723.hcsp?dDocName=bok1_033723

http://www.healthteamworks.org/pdf/pcmh/pilotdocuments/pcmh_overview_summary.pdf

Downtime Procedures

Be sure that your downtime procedures are available in the office in three-ring binders and not just on someone's computer. You might need them when there is a power outage or severe system malfunction. If they are only available online you will not be able to get to them when you need them most. Store an additional copy off site in case you do not have access to the office for some reason.

Basic EHR Support and Maintenance (continued)

Ongoing Build Efforts

Adopt a simple governance process for identifying, reviewing, approving, applying and communicating changes, improvements and additions to your EHR's capabilities.

- If your EHR allows you to develop data entry templates, you may want to develop more or customize the ones that you have.
- You may want to change the wording or formatting of the forms and letters that are generated by your EHR.
- The list of available clinical decision support rules will always be evolving and expanding. Your vendor may have additional rules that you can simply enable.
- You may want or need to change your order sets as medical knowledge advances or your practice, hospital, lab or other entities change their service offerings.

Monitor and prioritize these efforts so that you don't lose control of the amount of time that you and your colleagues and staff are spending on these activities.

Additional Modules

Your vendor probably will offer additional extra-cost capabilities as upgrades to your initial EHR configuration. Many of these can be quite valuable, such as a patient portal and connection to your local health information exchange. In some cases these capabilities will be required to achieve meaningful use. Others may provide benefits to your practice without impacting meaningful use. As with your original EHR selection decision, you will need to evaluate the total cost of any new module and compare that to the benefits, which you will derive from its installation.

General Hardware Support

Whatever type of EHR you have implemented, you are responsible for supporting some type of hardware and network in your office. That means that you need to plan ahead to prevent and address hardware failures, and to upgrade your system and backup your data on a regular basis. Consult with your vendor and your IT services company to determine best practices, but be sure to have a plan in place because hardware and networks do fail, often at inconvenient times.

Additional Resources

To supplement your vendor's support, look to see if there is an online user group that might be a resource for you. These groups are common to most vendor systems and can be very helpful. It is definitely worthwhile to join the group when you are a new user so that you can learn from other more experienced sites.

Also, more and more vendors offer webinars free of charge. These are the primary way to learn about upgrades and new modules. For example, many vendors are offering detailed webinars on how their software supports the meaningful use objectives.

Clinical Decision Support

Complete EHRs and certain EHR modules have clinical decision support (CDS) capabilities. CDS is a module, application or process that helps health professionals make clinical decisions to enhance patient care. The clinical knowledge embodied in a CDS ranges from simple facts and relationships to best practices for managing patients with specific disease states.

The Agency for Healthcare Research and Quality has funded research and compiled extensive resources on CDS. http://healthit.ahrq.gov/portal/server.pt?open=514&objID=5554&mode=2&holderDisplayURL=http://wci-pubcontent/publish/communities/k_o/knowledge_library/key_topics_backup/health_briefing_01242006122700/clinical_decision_support.html

The CDS Wiki sponsored by the Healthcare Information Management Systems Society (HIMSS) provides a good, unbiased resource on the state-of-the-art in CDS. <http://himssclinicaldecisionsupportwiki.pbworks.com/w/page/18288543/CDS-and-Meaningful-Use-Home-Page>



Meaningful Use

If meaningful use was one of the main reasons that you decided to acquire an EHR, then one of your most important post-implementation activities is measuring each physician's achievement of meaningful use.

Meaningful use is being implemented in three stages. Stage 1 begins in 2011. Stage 2 begins in 2013 and Stage 3 begins in 2015

The first step in achieving meaningful use is to have a certified EHR (modular or complete) and to demonstrate that you are using it to meet the defined measures for Stage 1. Remember, if you opt to deploy modular technologies versus a single vendor complete EHR technology, the modules must be capable of performing all 25 meaningful use requirements in Stage 1. If you plan to participate in the federal EHR incentive program, regardless of the technology you choose, it will be important to stay updated on the requirements for stages 2 and 3 and work with your vendor(s) to address any functionality gaps or upgrades.

For Stage 1, providers will need to report their performance on 20 total measures. Fifteen are core measures, and five can be selected from a 10-item menu set with at least one of those five selected from the two population and public health measures. Stage 2 and Stage 3 have not yet been defined; however, there are some indications that all of the Stage 1 menu set objectives will become core objectives in Stage 2. And for those measures using a percentage measure, the percentage will increase.

The measure for use of computerized physician order entry (CPOE) for medication orders, for example, is 30% (of all unique patients) in Stage 1 and will likely move to 60% for Stage 2 and 90% for Stage 3.

As the next stages of meaningful use are defined you will need to install your vendor's upgrades and implement certain workflow changes to achieve those new levels.

| First Payment | Payment Year | | | | |
|---------------|--------------|---------|---------|---------|------|
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| 2011 | Stage 1 | Stage 1 | Stage 2 | Stage 2 | TBD |
| 2012 | | Stage 1 | Stage 1 | Stage 2 | TBD |
| 2013 | | | Stage 1 | Stage 1 | TBD |
| 2014 | | | | Stage 1 | TBD |
| 2015 | | | | | TBD |

Summary

We have reached the end of our 6-module series. Our goal has been to provide you with an overview of health IT and its impact on your small practice. We discussed the revolution in healthcare technology and how EHR technology can be implemented in your practice. We hope we have provided you with the information you need to make an informed decision regarding the technology that is most appropriate for your practice.

For additional Health IT resources, please consult the AMA website.
www.ama-assn.org/go/hit

Meaningful Use Stage 1

Providers must meet 15 "core" requirements as well as five out of 10 "menu" requirements.

See the AMA's document outlining all of the measure requirements at:

<http://www.ama-assn.org/resources/doc/hit/meaningful-use-table.pdf>

Please see Excel document - "[Stage 1 objectives and measures](#)"

Meaningful Use Stage 2

No one knows exactly what the Stage 2 meaningful use criteria will be. It is likely that they will further encourage the use of health IT for continuous quality improvement at the point of care and the exchange of information in the most structured format possible. This includes the electronic transmission of orders and the electronic transmission of diagnostic test results. Stage 1 menu set objectives will be transitioned into the core set for Stage 2 along with an increase in thresholds required.

Stage 2 will probably also add several administrative requirements as well as higher thresholds for measures such as ePrescribing which is 40% in Stage 1. Stage 1 only requires use of one CDS rule, but the original proposal required five rules. That is another likely increase for Stage 2.

Meaningful Use Stage 3

No one knows what Stage 3 will require, but it will almost certainly focus more on improving quality, safety and efficiency by requiring physicians to meet minimum expected performance levels. It will also begin to focus clinical decision support functionality on national high priority conditions. Stage 3 is also likely to drive increased patient access to self-management tools.

<http://www.cms.gov/EHRIncentivePrograms/>