



# **mdsmedical**



## **the ambulatory physician's guide to electronic medical records**

integrated vs. interfaced  
hosting models - asp or client/server?  
what is CCHIT Certification?  
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# The Physician's Guide to Electronic Medical Records (EMR) Software

**A challenge awaits the physician who has had enough of the frustrating inefficiencies, financial penalties, and antiquated practices associated with maintaining a paper-based medical office. So the decision is made to digitize the practice. Any initial enthusiasm disappears once an initial search for electronic medical records uncovers hundreds of products and vendors. It doesn't take long before the 300 or so electronic medical records system screenshots and feature/benefit grids begin to look remarkably similar. The sheer number of vendors occupying the EMR (electronic medical records) market is unmanageable without a basic product assessment/elimination strategy.**

Making matters worse, choosing the wrong vendor could be catastrophic for your practice and cause irreparable financial harm. Imagine zero collections for 6 months; corrupted or lost patient data; or productivity crawling to a screeching halt because your vendor hasn't provided adequate training or support. These are very real possibilities when you entrust your practice to a non-CCHIT® Certified product, or make a purchase decision based on finding the cheapest product you can find.

For physician practices with limited time and resources, the selection process can appear overwhelming. Fortunately, physicians can begin to narrow down potential systems by eliminating uncertified products, as well as those built upon dated technology. With up to \$63,750 per physician in Medicare and Medicaid incentives now a consideration with the passage of the HITECH Act, choosing the wrong system could mean losses in the hundreds of thousands of dollars range, even for the smallest of practices.

## **Eliminate products not certified by the CCHIT® (Certification Commission for Healthcare Information Technology).**

By confining research only to CCHIT-certified EHR (electronic health record) products, a substantial number of systems are quickly eliminated. As of this update in February of 2010, only 18 ambulatory EHR systems have successfully met the more rigorous 2011 standards. Using CCHIT certification as an initial benchmark is practical for a variety of reasons: The CCHIT is the sole Healthcare I.T. certification organization, and is publicly endorsed by the American Academy of Family Physicians; the American Academy of Pediatrics; the American College of Cardiology; and the American Medical Association, among others. In addition, a CCHIT Certified designation ensures that a product has met the basic requirements for functionality; interoperability; and security and privacy.

A 2011 CCHIT certification warrants the product's utilization of standard formats enabling the exchange information with other systems – known as interoperability. The exchange of patient information on regional and national levels is the underpinning of a more efficient and less costly healthcare system. Medicare and Medicaid stimulus reimbursements are dependent not only upon the verification that the practice can show they have purchased an electronic health record system, but specifically restricts the financial incentives to those practices who show "meaningful use" of a Certified EHR system.

## Eliminate Products That Do Not Operate On A Shared Database for Billing, Scheduling, and Charting.

As few as five years ago, “interfaced” practice management/billing and patient charting systems were standard. Today, “interfaced” systems are technologically inferior to medical software that has been developed from the ground up by a single vendor, on a single platform, and utilizing a single database – otherwise described as ‘integrated’ or ‘unified’ electronic medical records and practice management systems.

Interfaced systems are still sold today, and there are even some that are CCHIT Certified and sold by the largest vendors in the industry - so it is a “buyers beware” market. In the past several years, there have been a number of mergers and acquisitions between vendors having market share in one side or the other (scheduling and billing or charting/EMR) but desired a comprehensive solution to offer physicians. As a result, there are products

currently marketed as a “suite,” but were developed by disparate vendors on different platforms, tied together using a separate application. Although generally transparent to the practice, there are questions of data integrity; patient safety (for example, a patient’s practice management/billing record does not match the clinical record and lab results get overlooked in the mess); system performance; future development and upgrades; and even the vendor’s commitment to the long term development and enhancement of the product.

### Is That EMR Really “Integrated”?

- Did the **same company** develop the billing and charting sides of the software, or was the ‘integration’ a result of a merger, purchase, or acquisition? *If the latter answer is yes, you can be confident it is an ‘interfaced’ system.*
- Is there a **single login for the billing and charting**? If you have to log in twice to access the billing/scheduling and charting, you typically are not looking at a truly unified system.
- Is there a **common database** throughout the application or do demographics have to be entered twice?

Unfortunately, uncovering if a system is integrated or interfaced is not always straightforward and may require the buyer to conduct some detective work. The first step is to ask the vendor questions about the product’s history – which company developed it, does it utilize a common database, and is there a single login for billing and charting? Some interfaced systems require users to log in separately to access the practice management/billing and the clinical portions of the software – so this is an easy way to identify an interfaced system.

Following the elimination of uncertified products with dated technology, the pool of suitable products begins to shrink and the specific needs of the practice should be defined and considered.

## Establish A Budget!

Medical software systems vary widely in cost. By establishing a flexible budget early in the process, practices can avoid wasted time looking at systems that are too expensive or potentially not robust enough to meet the needs of the practice. For example, if your budget is \$200 per month, don’t bother looking at fully integrated CCHIT Certified systems.

Systems vary widely in functionality – many of the least expensive systems on the market are nothing more than a word processor on steroids, and not a true EMR that will improve clinical workflow, patient safety, and meet the goals of a growing practice. Ask questions about ongoing maintenance costs and what the maintenance covers, just as you would ask when making decision to purchase a car.

## Does The EMR Have Content And Workflow For *Your Specialty*?

Not all EMRs accommodate all specialties – regardless of what the sales rep claims. For example, some leading vendors have well-developed content for family practice; internal medicine; and pediatrics; but may not fare as well in specialties such as ENT, obstetrics and gynecology, or cardiology. By asking the vendor to demonstrate the product’s performance in a specific specialty, the number of suitable software systems will dwindle.

## How Scalable Is The EMR?

Just as not all electronic medical records systems accommodate all specialties, most are geared toward a specific practice size – with features and cost typically reflecting the product’s expansion capacity. In general, if the practice expects to add providers or additional locations over time, it is important to start with a product that is stable and feature-rich enough to handle the workflow of a larger practice - even if the product’s features may not be fully leveraged early in the product’s lifecycle.

Finally, it is time to ask questions about the vendor’s service and support – the most ambiguous, but arguably most important aspect in the decision making process. After all, you can purchase an electronic medical records software system with every bell and whistle, but if the implementation is disorganized; the training inadequate; or the post-installation support lacking – productivity will drop; providers and staff will be frustrated; cash flow may be interrupted, or worse.

## Why Are There Such Large Price Differences Between EMRs?

EMR and practice management features and functionality can vary as widely as the quality of a WalMart shirt versus a Nieman Marcus one. To better describe the range of EMRs on the market today and simplify their descriptions, we will use the terms “Basic EMR” and “Professional EMR”:

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### Basic EMR Features

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- **Range from \$100 - \$400 per month, per provider** for a web-hosted system.
- Typically deployed remotely (a training or implementation person will not come to your office).
- “Cookie cutter” approach to purchase, implementation, and training. Any problem or complication may seriously compromise the success of your installation.
- Few basic EMRs are CCHIT Certified (the current certification criteria for Medicare/Medicaid stimulus money, as CCHIT is the only EMR certification body in existence as of this writing).
- Few participate in KLAS®. KLAS is considered the “consumer reports” of medical software, and vendors are constantly ranked based upon ongoing reviews by current customers. Most industry leading vendors are happy to share their user reviews with prospective practices – it’s tricky to evaluate a product objectively when vendors don’t participate in KLAS.
- Fewer clinical templates, more of a souped up word processing system than a true electronic health record.
- Usually clunkier, less efficient and flexible workflow (more clicks).
- Older technology because vendors in this range often don’t have the substantial resources required to continually update and enhance software to meet changing industry standards.

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### Professional EMR Features

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- **Range from \$500+ per month, per provider** for a web-hosted system.

- A consultative implementation of your project – the system setup and training is customized for the specific needs of your practice.
- Backed by financially sound, industry-leading vendors. There have been a number of vendors over the years that have went bankrupt (think Dr. Notes) – in that case, what happens to your data?
- Always CCHIT Certified. Despite some industry criticism of CCHIT, it still remains a key gauge if a vendor has the financial resources to meet stringent requirements – and you certainly don't want to risk the future of your practice to a company who is not "too big to fail."
- Always participate in KLAS.
- Vendors have financial resources to continually develop and enhance product to continually meet standards.
- Typically (though not always!) newer technology, shared database streamlines data exchange between billing and EMR.
- Robust features, extensive clinical template libraries enables faster return-on-investment and quicker productivity gains.
- Codes at the highest level for maximum reimbursement based on chart data.
- Always scalable and interoperable if the practice grows, merges, or plans to connect regionally to hospitals or other practices.

## Take Stock of Your In-House I.T. (Information Technology) Resources

Does the practice have a staff I.T. department or a trusted I.T. firm? If not, it's important to ensure that the software vendor offers I.T. services. Improperly installed hardware or inaccessible support personnel can have a detrimental effect on the success of the training and implementation.

### Web-Hosted vs. Client/Server

Smaller practices today typically opt for a web-based installation to decrease the cost of hardware and eliminate the need to maintain servers and other equipment. Web-based installations are known as SaaS (Software as a Service) and are delivered by an ASP (Application Service Provider). The ASP hosts the software in a secured data center, and the end-user (the practice) simply accesses the system using a web browser. All that is required is a high-speed internet connection and a workstation. Access to the data is dependent upon the internet connection, so mission-critical applications are not appropriate in a SaaS environment under most circumstances (such as a hospital emergency room).

The alternative to a web-based installation is Client/Server, requiring an onsite server and regular maintenance of the system by the vendor. Both types of installations have advantages and disadvantages, so it is important to discuss installation options with potential vendors.

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## ASP (Web-Hosted) Pros and Cons

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- Clinicians access data from anywhere at anytime – from the hospital, home, or from within the practice.
- Much lower upfront costs than Client/Server. Costs may be higher over time, but not necessarily. You will need to continually maintain and upgrade servers, workstations, backup systems, and other I.T. infrastructure to support the system, and those costs will add up. In addition, you will still need to pay software maintenance and support – which is typically included in the ASP bundled pricing.
- One potential disadvantage of a web-hosted system is that it is not immune to technical disruptions such as internet outages or line failures. Should you have an interrupted internet connection for any reason, you will not be able to access your billing or patient charts if you don't have a backup connection.
- You don't have to worry about backups and disaster recovery in most cases – as your vendor will do that for you. Most vendors have highly secured data centers with redundant servers, so your data is safe and always backed up in the event of a server failure.

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## Client/Server (Server-Based) Pros and Cons

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- Your practice owns the software, so you aren't paying indefinitely for the software licenses.
- Possible tax advantages through Section 179 deductions (talk your tax advisor).
- Cost of a Client/Server EMR system is much higher in the beginning due to increased hardware requirements, hardware installation costs, and the cost of purchasing the software licenses.
- You may see increased speed and performance of your system when it's at your facility, particularly if you do not have guaranteed bandwidth on your internet connection.
- You will need to contract with the MDS I.T. department or your own I.T. vendor to ensure that your system is backing up and disaster recovery procedures are in place. The ongoing costs for I.T. maintenance should also be a consideration in your decision.
- Smaller medical practices simply do not have the I.T. resources required to maintain a server in house and ensure the daily backups are processing and transported to secure offsite storage. What happens when something goes wrong? Consider natural disasters (tornadoes, hurricanes, earthquakes), a fire, or a burglary – what would happen if your server and data was destroyed, and would you have a reliable backup from which to restore the data?

### **Assess technological skills of clinicians and administrative staff. Ensure the vendor's project planning and implementation staff can aid the practice in choosing who the functional area "champions" will be.**

Training and "go-live" support expenditures account for a substantial portion of the total initial system cost, and careful planning is essential for a smooth implementation. The vendor should provide a project coordinator that will help the practice make critical decisions and schedule the project timeline. Most practices utilize a combination of web-based and on-site training prior to go-live (the days or weeks dedicated to going 'live' on the new system and transitioning away from the old system). In addition, the vendor typically provides onsite support for the practice during the go-live. The number of training days, go-live days, and the delivery (web-based or onsite) is determined by the size of the practice and the skill levels of the staff. Follow-up sessions to reinforce original training or introduce advanced concepts are important for continuity.

To keep costs down, some practices may utilize a heavier web-based training plan for the bulk of the staff with designated super users who attend advanced training. For practices with less technologically savvy staff, more handholding through onsite training may be the best option. In addition to improperly installed I.T. (hardware, networking, security, and workstations), insufficient training or post-implementation technical support are prominent failure points in medical software implementations.

### **Avoid "Cookie Cutter" EMR Vendors**

Various studies continue to show that the EMR failure rate continues to hover in the 50% range! This means that 50% of practices that buy EMRs abandon them, de-install them, or don't use them for the purpose originally intended.

Some vendors today are approaching EMRs as commodities – where one is just as good as another, training is a luxury, and every practice or specialty is basically the same. Some "cookie cutter" vendors provide customers with an order form to check off specific functional areas. Order forms may work when you are buying a pizza, computer, or even a car – not when you are buying a system that will completely modify the way you conduct your

practice on a day-to-day basis. A key reason that EMR implementations fail continue to fail at a high rate even today can be traced to a few key areas:

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## Why do EMR installations fail?

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- **Inadequate training.** Without sufficient training, an EMR implementation will fail. By cutting corners on training, you will never achieve a rapid return-on-investment and will pay for it perhaps hundreds of times over in productivity and financial losses. Robert Lowes, senior editor of Medical Economics goes as far to state, “A \$30,000 electronic medical record system is like a \$30,000 grand piano. Whether you play the equivalent of Beethoven's "Moonlight" sonata or "Chopsticks" depends on your level of training.” (Medical Economics).

Your EMR vendor absolutely must take the time to evaluate your practice and recommend a customized training and implementation plan for your practice. What works for a 2 physician orthopedic surgery practice in Los Angeles may not work for your rural 2 physician Internal Medicine practice in Mississippi. Even if the number of physicians and users are the same, the training and implementation plan will vary.

- **Inadequate post-implementation support.** Upon commencement of training, is your practice shuffled off to an offshore call center for support? Without continuity of the implementation process from sales to training to post-implementation support, the original goals of your electronic medical records installation can be lost. An ideal scenario is when the EMR vendor continues to have a primary contact for your practice from the sales process all the way through to the post-implementation/support phase. This way, your key ‘pain points’ will always be at the forefront and you will continue to assess progress against your original goals.
- **“Cookie Cutter” Implementation and Sales Process.** Addressed earlier in the training section, this issue bears repeating. Unless your physicians double as programmers or otherwise are highly technically savvy, you should not buy a system from a salesperson who doesn’t take the time to understand the individual needs and workflow of your practice. If your vendor doesn’t understand your particular pain points and recommend a customized project plan, you can be certain that you will be dissatisfied with the system and potentially end up replacing the system in a few years.

## Who Supports The Practice After Go-Live? The Original Training Staff or a Call Center?

Not only does unresponsive technical support frustrate and discourage users, it fosters lost productivity when users struggle with denied claims; unanswered questions; or broken functionality. Still, large vendors often outsource support to overseas call centers – lowering vendor overhead at the expense of high-quality, timely, and knowledgeable support.

By asking relevant questions, evaluating the needs and culture of the practice, and systematically eliminating unsuitable products and vendors – practices can enjoy the host of current and future financial and patient safety benefits that an electronic health records system can deliver.

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## ABOUT MDS MEDICAL SOFTWARE

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Headquartered in Scottsdale Arizona, MDS Medical is a privately held integrator of electronic medical records software (EMR), practice management (PM) solutions, and medical billing services. Physician practices nationwide in more than 30 specialties rely on MDS to advance the use of medical office technologies that facilitate efficiency improvements; increased profitability; and the delivery of safer patient care.

MDS was ranked on the 2009 Inc. 5000 list of the fastest growing private companies in America, and the #1 fastest growing Healthcare Company in Arizona.

MDS' proprietary electronic medical record implementation model reduces downtime and lost productivity, accelerating return on investment. For more information, visit [www.mdsmedicalsoftware.com](http://www.mdsmedicalsoftware.com) or call 1-800-494-3188.