Information Technology TRENDS and SOLUTIONS

AC Group Releases Updated

Thursday, September 06, 2012

Extensive Evaluation Ranks Top Practice Management and EHR Applications

Beware – the Ice Age is coming

The New Generation of EHRs
DRT Enabled EHRs

A White Paper By:

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For more information on the detailed 400+ page report, visit the web site at http://www.acgroup.org or contact Mark R. Anderson at 281-413-5572 or by email at mra@acgroup.org

AC group INC.

AC Group Updated Report
Digital Medical Office of the Future Survey

AC Group, Inc., formed in 1996, is a healthcare technology advisory and research firm designed to save participants precious time and resources in their technology decision-making. AC Group is one of the leading companies, specializing in the evaluation, selection, and ranking of vendors in the PMS/EMR/EHR healthcare marketplace. For the last three years, AC Group has produced an annual report on the Digital Medical Office and the use of Technology by physicians. This comprehensive report includes detailed reviews of the Mobile Healthcare, Document Imaging, and EMR marketplace. The report also includes the most comprehensive evaluation of vendor EMR functionality to date - more than 5,000 questions. This evaluation decision tool has been used by more than 25,000 physicians since 2002. Additionally, AC Group has conducted more than 300 PMS/EHR searches, selections, and contract negotiations for small physician offices to large IPAs since 2003.

- How do you determine if you are ready to "leap" into the EMR or replace your PMS application?
- Can you always believe what the vendor tells you?
- Where does a group go to find third-party independent evaluations of vendor's functionality, financial viability, customer support, and overall best price?
- How can you determine if there is a quantified return on investment (ROI)?
- How can you leverage the use of an EMR or new PMS to improve reimbursement, improve quantified clinical quality, and reduce malpractice costs?
- Who can you turn to for third-party independent advice?

The answer: ***AC Group's Physician Technology Evaluations***

Our Advisory and Consultative offerings are numerous, and can be customized to your practice's unique priorities. To assist your organization, we have created five options:

Option 1 – Educational Update – For those organizations that are just starting the process of considering newer Technologies or just need a third-party independent review, AC Group can provide your practice organization with an educational update on the "Digital Medical Office" of the future. The educational sessions can be customized from 1 to 4 hours depending on the number and type of participants and the overall goals of your practice. Our educational sessions provide your practice with a wealth of knowledge regarding the six-levels of healthcare technology, the trends and issues that healthcare organizations face, the truth about technology and the effect on workflow, the true costs and benefits of automation, the pitfalls to watch out for, a detailed review of functionality requirements, and how well selected vendors (over 60) currently meet those requirements.

Option 2 -Technology Briefing and Readiness Review - AC Group can provide your practice with a technology briefing and readiness review. Under this option, Mark Anderson will come to your practice, meet with members of the practice, will present information on technology and software options and will conduct a brief operational review of your practice's readiness. The Technology Briefing and Readiness Review will provide you with one to three days on site (depending on the size of the practice) plus 14 days of operational questions via phone and email. AC Group will develop a report that outlines the practice's readiness to embrace EHR.

Option 3 - Contract Negotiations – For those practices that have already made up their mind on which application they would like to purchase and install, AC Group can assist with contract review and negotiations. Probably the most tedious and important step of the entire process is contract negotiations. During contract negotiations, we should be able to increase installation assistance, improve the payment criteria, establish quantifiable goals and objectives and finally, we have always been able to negotiate a lower contract price that more than pays for ACG's entire fees.

Option 4 - Vendor Search/Selection and Contract Negotiations – AC Group can become your advisor on the project. Under this option, one of our experienced consultants will be available for conference calls to discuss which vendors you should consider based on 10 operational considerations. AC Group will provide your organization with a side-by-side comparison of the top 10 vendors that are best position to meet your practice needs. The comparison will rank vendors based on functionality, financial stability, end-user satisfaction, and implementation approach. AC Group will also assist in the selection of 2 to 3 vendors for on-site demonstrations, provide scripts and guidelines that each vendor is required to follow in those demos, and advise on final vendor selection. Mr. Anderson will also assist with contract negotiations as described in Option 3.

Option 5 - Operational Assessment, Vendor Search/Selection and Contract Negotiations - AC Group can provide your practice with a comprehensive program to ensure that your practice selects the best system(s). Under this option, an experienced consultant will come to your practice, meet with your practice representatives, present information on technology and software options, conduct an operational review of your practice's readiness, and will assist with the numerous tasks required to select the right system. This option includes all tasks described in Option 4 and, in addition, on-site consulting for operational review and vendor demonstrations.

Option 6 – Implementation Assistance - AC Group can provide your organization's with implementation oversight. Oversight is conducted onsite and remotely via email, web casts, and conference calls. The main purpose is to monitor the vendor's responses to your needs and to insure an effective implementation. AC Group will strive to eliminate the client/vendor miscommunications that occurs in 85% of all EHR implementations We will assist in the "Change Management" process that must occur to insure effective use of the new systems. We will assist your organization with the process of Clinical and Operational Transformation in order to reduce risk, Improve financial gains, and to reduce the "change pain" factor.

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1. *Introduction:*

Before purchasing any PM or EHR application, ever practice should seek help with software and support contract negotiations. The most tedious and important step of the entire process is contract negotiations. During contract negotiations, you need to increase installation assistance, improve the payment criteria, and establish quantifiable goals and objectives and, finally, reduce the overall project costs. On Average, AC Group has saved our client's 2x to 9x our fees and have negotiated more than 80 changes to vendor contracts designed to protect the practice.

AC Group's 14th report on the Digital Medical Office of the Future includes a comprehensive evaluation of some of the top PM and EHR vendor applications. Since 2000, AC Group has evaluated over 120 EHR applications including over 85 vendors that offer a combined (Interfaced and Integrated) PMS and EHR application. Eight years later, we have determined that the current ambulatory EHR marketplace needs a complete revamping if we are ever going to come close to the national goal of having over 80% of the physicians using an EHR by 2014.

Where do we start? Let's start with the positive – the government has estimated that the nation could save over $200B annually if physicians adopted EHRs. Additional they have estimated that more than 90,000 lives could be saved. Software vendors have promised 3% to 8 % increase in provider revenues and improvements in efficiencies that can exceed 18%. The government has even jump on the EHR band wagon by offering a program that certifies product functionally following standards by a federally funding program labeled CCHIT. With the average cost of EHRs finally starting to come down, you would think that there would be a rush of healthcare organizations embracing new EHR technologies. Even President Obama's 2009 stimulus package includes over $18B in government incentives for technology adoption. Everything points to an explosion in the EHR marketplace. However……..

Physicians have not leaped into the EHR jungle. In fact, according to numerous studies, EHR adoption has been minimal. Organizations estimate that US EHR adoption and full utilization barely exceeds 4% with an additional 13% of the physicians using parts, but not all of the EHR applications. So with the perceived benefits of EHRs, why has the industry been slow to adopt? Ok, now we are going to talk about the negative side of the EHR marketplace. Let's start by looking at a few of the problems:

2. The MYTH Busters:

- **Saves Time** - Every vendor will tell you that their EHR will save you time. However, when you ask for specifics you usually receive some vague reference to a study completed years ago by someone else. The better question should be, "Prove to me that the vendor's specific EHR will save me more time than any other EHR product". Where is the proof? Where is the third party study that validates the perceived time savings?

  In a paper based system, the average physician spends less than 120 seconds recording clinical information about a new patient and only 38 seconds recording information relating to clinical indicators during a return or established patient visit. When evaluating the amount of time that is typically required to conduct a visit using an EHR, we found that the average provider spends 7.5 minutes on new patients and 4.3 minutes on return patient visits. Given the average ratio of 13% new patients to 87% returning patients, the typical EHR would require an additional 187 minutes per day of charting time. That's 3 hours of additional work per day. So where is the perceived time savings? To help solve this issue practices need to search for DRT enabled EHR products

- **Interoperability** - Healthcare information technology (HIT) is grossly fragmented and has abysmal data sharing. It is fragmented and operates as millions of solo disconnected enterprises with little communication. To help solve this issue, practices and communities should look for products that are proven to be able to connect with an Integrated Community/Collaborative EHR. To help understand this we have created a new term called "***Welcome to the ICE Age"***.

- **HIT approaches to date** are divisive and compartmentalized; integration of our current healthcare delivery system into one seamless system is not happening. The healthcare industry must rethink its fundamental approach to IT automation and look to other industries who have successfully implemented interoperable IT frameworks such as Finance and Telco. Once age, a community ICE project can help solve this issue as long as we can create separate databases for each practices while allowing individual physicians to continue practicing medicine following best practices.

- **Lack of User Interface Consistency -** Doctors, nurses, techs all must use different, often multiple interfaces to access information. They don't want to learn "computering"; they want to provide care, they want to get work done. There is no single access priority. Thus, clinical user adoption/utilization of HIT, despite acknowledged advantages, has been like "pushing mules." Practices should be looking for one fully integrated PM and EHR product that has a close interface with a community PHR.

- **Ancillary Medical Services**, police, fire, emergency squads, etc., are typically neglected in current systems. Once again, the ICE Age will help solve this issue since first responders could achieve access to clinical data on patients following the national CCD standard for data sharing.

- **Hundreds of Billions** of dollars are wasted every year in the US due to this gross lack of interoperability coupled with the resulting gross lack of coordination of information. With silos of information, the patient must provide the same data to multi healthcare providers. The cost to capture and record a patient's social history, medical history, family history, ROS, HPI, Vitals, Medications, lab results, etc requires duplication of effort and the possibility of errors. The ability of sharing validated clinical data between care providers can help reduce data entry time by 67% while reducing the chance of errors by 92%.

- **Millions of Lives** are needlessly lost every year due to medical errors that result from poor data control and sharing. The problem is not with the providers, but with a lack of timely and accurate information that providers has when making clinical decisions. In over 83% of office visits, critical information is not available to the provider at the time of care. Many times, additional information is store on paper in another practice's chart room. In other cases, the patient cannot remember what medications they are taking or they tell the provider they are taking a different medication that what was original prescribed by another provider. To reduce errors, we need all clinical information available to every care providers at the time of treatment and we must eliminate the silos of information that is store in every practices chart room.

- **President Obama's** call to arms to make electronic health records available to most Americans by 2014 will fail without major change. The current proposed stimulus package of over $18B will not solve any problems until the community of physicians stand up and make it very clear that the current process does not work. Let's face it, after 20 years we only have 4% of physicians fully utilizing an EHR. Someone needs to stand back and yell out loud once again, "I am Mad as Hell and I am not going to take it any more". The current process does not work. We need a new vision and we believe that DRT enabled EHRs and being prepared for the ICE age is that vision.

- **Patients and Employers Pay** the price with needless loss of life and skyrocketing healthcare costs. The CEO of General Motors appropriately put this dilemma into context: GM spends more on healthcare than it does on steel to build its cars. Our proposed vision of DRT enabled EHRs and the establishment of Integrated Community EHRs (ICE) can help reduce overall healthcare costs by up to 23%.

- **Current EHR products are too complicated.** We need to learn to walk before we run. The designers of EHRs create systems to capture over 1,000 discrete data elements for each visit. The problem, the data collection system requires on average 7x more input time than under the old handwriting or dictation process.

- **There are too many vendors** trying to capture the same 600,000 plus physicians**.** Physicians want choice, but do we really need 400 choices?

3. *The Future of the Digital Medical Office*

Spending on technology by physicians has tripled since the 1990's and is expected to triple again in the next six years. [(1)]. It is anticipated that the average physician will be spending up to $14,000 for an Electric Health Record (EHR) software application and an additional $3,000 for other related 3rd party software. Additional hardware, networks, and mobile devices, could raise the level of spending for the average physician to $15,000 per year on technology. Although some of these additional costs may be offset by reductions in transcription, medical record storage, improved coding and charge capture, this still represents a significant additional initial and recurrent cost, particularly for small office practices.

When choosing a system, one should focus on the system itself, its features, feel, and perhaps most importantly, the track record of the software vendor. When comparing prices between vendors, one must make sure that each vendor is offering comparable features and options. This task is one of the hardest for most physicians since there are almost 400 vendors stating that they sell the "best" product in the marketplace. The first question every physician should ask is, "has EHR implementations been successful?"

Most healthcare executives would agree that today's healthcare field bears little resemblance to the one of a decade ago. To be effective in the future, healthcare leaders will need to understand better how IT strategies can help address emerging trends in American healthcare-from managing a more diverse workforce to leading management teams with new cyber-communication technologies to keeping trustees focused on mission and vision in an increasingly complex healthcare environment.

In 1995, healthcare IT experts optimistically predicted that more than 50% of physicians would purchase an Electronic Medical Record for their practice by the end of 2000 [(2)]. In 2003, many believed that EHR adoption would expand and by 2008 the adoption rate was expected to exceed 62%. We even heard about one study in Physician Practice Magazine claiming that EHR adoption has already exceeded 73%. Of course further evaluation showed that their definition of EHR included a physician receiving a lab results electronically from a hospital. In this case, the lab result is a "secured message" – NOT an EHR application.

In reality, by 2008 a combination of technology issues, reimbursement issues, and the difficulty of justifying the capital costs of the EHR based on a lack of a true return on investment (ROI) left the estimated percentage of physician users at only 17% across all practice environments. [(3)(4)] According to the New England Journal of Medicine, only 4% of providers are using an EHR for complete documentation and the remaining 13% only use portions of the EHR. What this tells us is that after 30 years of EHR adoption; only 4% of physicians have seen the "value" of using an EHR for complete documentation. Therefore, it might be impossible for the nation to achieve the goal of 80% physician adoption by 2014. In reality, based on the adoption rates over the past 30 years, we might not reach 20% adoption and full use of EHRs by 2014. The bottom-line, the industry must find a way of showing "EHR value" instead of just trying to sell a "tool". We believe that an EHR is just a tool and to

1 AC Group, Inc. study of technology spending trends for small to mid-size physician practices
2 2008 Annual Survey of physician adoption rates by AC Group, Inc. (3,935 physician practices)
3 2007 TEPR Survey conducted by the Medical Records Institute.
4 2008 *The N*ew England Journal of Medicine, Electronic Health Records in Ambulatory Care,— A National Survey of Physicians

insure adoption, we must help providers understand that clinical and operational transformation (COT) is a prerequisite for a successful EHR implementation.

The low adoption figure further concealed a significant discrepancy between users in large institutions and multi-specialty clinics and those in small office practice. According to one study, by the summer of 2008, 48% of all university and staff-model (Kaiser, Mayo, etc) physicians were expected to be using an EHR compared to less than 9% of community-based physicians in group smaller than 5 providers. [5]

Another study was conducted by AC Group during the summer of 2008. The survey asked physicians a basic operational question:"one year after purchasing your EHR were you using the EHR for on-line clinical review and documentation, placing orders and reviewing results, E & M coding, and are you generating an electronic note on 80% of your patients". We assumed that more than 60% of physicians that have purchased and installed EHRs would answer: "Yes – one year after purchasing our EHR we are seeing 80% of our patients electronically". In fact, we were shocked to discover that 73% of physicians indicated that: "NO – they were NOT able to use the EHR for charting on 80% of their patient charts".

The experts missed their projections primarily because they underestimated how fundamentally EMR adoption changes the way a physician works. In addition, they were overly optimistic on the performance and speed of introduction of the so called "killer applications" (voice recognition, intelligent charge capture, pharmacy formulary management) that were critical to the EHR's streamlining of workflow and return on investment. Physicians are far more likely to adopt changes that improve either their financial income, practice efficiency, or enhances the quality of patient care. Accordingly, automation of the physician practice is mostly likely to occur if the following principles are a central part of the implementation strategy.

- Create an incremental approach towards office automation
- Make sure the EMR integrates with minimal disruption of existing work flow
- EMR must either improve efficiency or reduce costs.
- Products must meet minimum national standards and baseline interoperability requirements.

5 2008 Presentation of EMR usage, TEPR and MGMA conferences by Mark R. Anderson

4. *Physician Adoption of EHR has FAILED!*

The EHR industry has been claiming great implementation successes for the past five years. When you ask the various vendors, "how many successful EHR implementation have you implemented", the answer would amaze even the most skeptical person – however in the wrong way. Based on data obtained in the 2008 AC Group survey, the top 100 EHR vendors claim they have more than 300,000 physicians using an EHR today. This is almost too good to believe – and for good reason. According to the New England Journal of Medicine Article dated July 3, 2008[6], "only 4% percent of physicians reported having an extensive, fully functional electronic records system, and 13% reported having a basic system". This means that after 20 years of EHR adoption, less than 30,000 providers are using the full capability of an EHR and an additional 90,000 are using partial EHR. So what does this mean for the entire medical community? Basically, the EHR industry has ***FAILED miserably***. The main question everyone should be asking is "Why after 20+ years do we only have 4% of physicians using fully operational EHRs?" The answer is usually "Cost is a factor". However, we do not believe cost is really the factor for low adoption. If fact, some EHR products are provided free of charge or at a highly subsidized rates. However, even these products are not implemented in masses. So what is the real problem with EHR adoption?

In many practices, a core technology package, such as billing and/or scheduling software, serves as the center of the practice's management system. Point-of-care technology is not being widely utilized. When there *is* an attempt by management to add modules to the existing system, the usual process involves calling the company who developed the core technology to see if they offer a module such as prescriptions or patient records software. Many times, the answer is no. Sometime the initial answer is no, but for a large fee, they may develop one. In some cases, when the company does, in fact, offer add-on modules, those modules do not offer the same strength as the original, core technology.

The hope for practices is there are non-proprietary solutions being built by a variety of companies. The fact that they are not proprietary makes them more powerful for the consumer. It allows a practice the freedom to shop for and choose the *best* scheduling package, the *best* billing package, the *best* patient record package, the *best* prescription package, and the *best* diagnostics package. And usually these programs come from different vendors.

The problem today is not so much in the multitude of offerings. The programs are out there. But once you have all of these best-of-breed modules, are they going to integrate and work together, giving you seamless and uninterrupted service doesn't require a patient's name and address to be entered in five different packages?

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6 - N Engl J Med 2008:349:50-60

5. Wrong National Strategy for EHRs?

C. Peter Waegemann from the Medical Records Institute clearly documented the problem with EHR adoption in his July 2008 article indicating the industry needs to correct six flaws in thinking:

1. **Costs are too high**: Not enough attention has been paid to this. Instead, priority has been given to functionalities, as evidenced by creating a Certification Commission on Health Information Technology (CCHIT), where the focus has been on raising the bar for functionalities, while pushing aside the issues of cost and ROI. Certification development consequently promotes more expensive EMR systems while disregarding low-cost systems. Indeed, the current US strategy is to recommend only certified EMRs, and these are generally the more expensive ones. This has greatly affected the implementation rate, particularly in the smaller office, where financial impact plays the biggest role in health IT adoption.

   If we want to increase the use of basic EMR systems, we need to give low cost systems a chance. Why not promote systems range in cost from under $1,000 to just a few thousand, rather than the $30,000 to $50,000 systems? Low cost systems, whether certified or not, could be the needed catalyst to increased use of computers in clinical applications.

2. **Information Capture:** Another main hurdle is the process of getting information into the computer. Opening up the right file with passwords and writing a prescription may take a little longer than scribbling a prescription onto a pad, making some users resistant to the technology. This example is typical for the documentation problem, i.e., that electronic documentation is disruptive, may take a little longer, and requires a change in habits. In addition, billions are wasted for outdated medical transcription, at the same time that handwritten notes continue to be tolerated.

   The reality is that an EMR's information capture options can be the key to its success or failure for a particular user. Thus, a national policy for EMR systems must focus on electronic information capture requirements and policies. This is particularly true for hospitals that have to transition to paperless systems and reduce or eliminate medical transcription with speech recognition and other technologies.

3. **Legality:** As healthcare providers are expected to move to paperless EMR systems, these computer systems must meet stringent documentation, authentication, and data integrity requirements that were established decades ago for paper documentation. Standards must be created to assure providers that their systems are meeting all appropriate medico-legal requirements. A national focus should be on making EMR systems legal, no longer requiring paper duplications of electronic documentation in states that do not recognize the legality of electronic records and/or electronic signatures. Such changes would facilitate all hospitals moving to paperless information systems and concurrently save millions.

4. **Functionality:** Since the 1960s, health IT has been focused on the vision of electronic medical records and electronic health record systems, i.e., on the output of care systems. Instead of trying to implement fully functional electronic medical record systems on a national basis, we should focus on computer-assisted care systems that may or may not have the same functionalities as an "ideal" EMR system. Remember that an EMR system consists of a bundle of functionalities. One could take any of the 9 functional clusters and create a meaningful application for physicians providing a lower price and easier transition. Stand-alone e-prescribing systems are a good example.

In addition, health IT vendors must give more attention to the breadth of the healthcare delivery in the development of their software. Although substantial progress has been made through the CCHIT process, some physicians—particularly those in medical specialties—still complain that EMR systems do not have the functionality or templates needed for efficient computer use in their practices. Greatly increased attention should be given to workflow processes and functionalities for the various medical specialties.

5. **Information Exchange:** Related to the EHR vision is the need to exchange health information electronically. There are four categories of information exchange, namely patient summary or status data, patient history data, management data, and financial data. Each has different data requirements and different communication requirements. As a result, one has to understand the networking options in order to be successful. Almost ten years ago, the vision of Community Health Information Networks (CHINs) became popular. More than 70 such projects were at various stages of implementation when ultimately all of them collapsed. Yet, warnings from industry experts to study what went wrong with CHINs were ignored, and five years ago, a new vision of Regional Health Information Organizations (RHIOs) was announced as part of the national strategy for health information technology. Now, in summer 2008, RHIOs show mixed results, ranging from those that have folded to those that are struggling to the few that may be sustainable. Clearly, new approaches are needed. They should involve three steps. The first is to investigate what went wrong with both CHINs and RHIOs; the second is to explore new communications strategies and the third is to stop using 4-letter terms since the majority of all 4 letter healthcare projects have failed in the past. Remember the old saying, “no one gets fired for buying from IBM”. Three initials where ok then and still works for PMS, EHR, EMR, eRX, EHX, EHI, etc. You have to smile sometime…..

   The question of what kind of information should be exchanged must be given priority before going forward with standards development or the creation of new systems. The physician who sees a patient after extensive services in the hospital usually does not want to see the resulting overwhelming patient medical record information. Most physicians do not have the time for, the need for, or the interest in all the details. Rather than drowning in the enormous volume of such information, a concise status summary is needed, typically in CCR (Continuity of Care Record) or CCD (Continuity of Care Document) format. In either form, the CCR data set gives a physician a concise, brief overview of all essential health data with pointers to the data’s source.

   At the same time, physicians must have the option to review complete patient information if necessary. This means that a second exchange option must be created either to provide access to (or to download) all or most patient information--including images--of a certain episode. Third, provider management data exchange must include additional applications such as booking beds in a hospital, placing orders with a lab and others, referring patients, transmitting prescriptions to a pharmacy, receiving questions from a pharmacy, etc. Finally, we must address the communication needs that exist between providers and payers. Real-time financial transactions are on the horizon. Sending claims and having general communication with payers at or immediately following an encounter is part of this. All of these need efficient communication methods.

6. **Continuity of Care:** For more than twenty years, the main aim for EMRs was to create continuity of care. Since then, complaints have abounded about “information silos” that cause medical errors, decrease the quality of care, create administrative waste, and cause inconvenience to patients. Patients are tired of providers to whom they must give the same demographic information over and over. Consumers are weary of healthcare providers who do not know their

allergies and medications. Clinicians would prefer not to start with a "blank sheet" but would like to know the essential health information when seeing a patient. The quality of care will increase when a physician has instant access to relevant data created by another specialist or provider that will affect decisions. As duplicate tests will not be necessary, healthcare costs may even come down.

Continuity of care has been pushed into the background since other functionalities - think of CPOE – have taken priority. It took two years for it to be a primary requirement of its certification process. Continuity of care must become the prime objective for health IT, and with the CCR data set, continuity of care can be achieved at relatively low costs and without all the complexities of a fully functional EMR.

Peter's Conclusion: Peter had it right. He concluded that the health informatics community, the various national organizations and professional committees and ONCHIT need to consider making major changes in order to have any hope for meaningful progress towards working, efficient, and successful EMR implementations. It is time to consider the failures of the past and to move on with new approaches that can enable a better and faster transition to computer-assisted care processes. The current implementation results of EMRs declare past policies and systems directions a failure. It is time that some of the strategies are changed. First, we need an honest and open discussion on the current situation. Second, we need to look at many of the health informatics myths such as "the goal of 2014 is easily achievable", or "interoperability can easily be achieved if we follow the HITSP standards". Only then can we create cost-effective, interoperable, non-proprietary, user friendly, workflow-enhancing systems that can truly assist medical professionals in their computer-assisted healthcare work.

So where do we go from here? Let's continue the process by drilling down deeper into a number of the items that Peter mentioned. We will first look at workflow and then new data entry Methodologies. Once we have evaluated these areas, we will spend some time talking about the different types of clinical charting products and the 5 levels of EHR products that we have been able to identify based on our 4,000 question survey on product functionality.

6. Workflow Benefits does not offset Data Entry Time

After an extensive review of 100s of EHR implementation, we have concluded that the problem with low EHR adoption is directly related to the amount of time that is required to enter specific patient clinical data into the EHR. In a paper based system, the average physician spends less than 120 seconds recording clinical information about a new patient and only 38 seconds recording information relating to clinical indicators during a return or established patient visit. Yes, the amount of information gathered and maintained in a paper record is limited, but since no one is paying for the data, the physician only records the information that is deemed necessary to complete the patient visit. When evaluating the amount of time that is typically required to conduct a visit using an EHR, we found that the average provider spends 7.5 minutes on new patients and 4.3 minutes on return patient visits. Given the average ratio of 13% new patients to 87% returning patients, the typical EHR would require an additional 187 minutes per day of charting time. That's 3 hours of additional work per day.

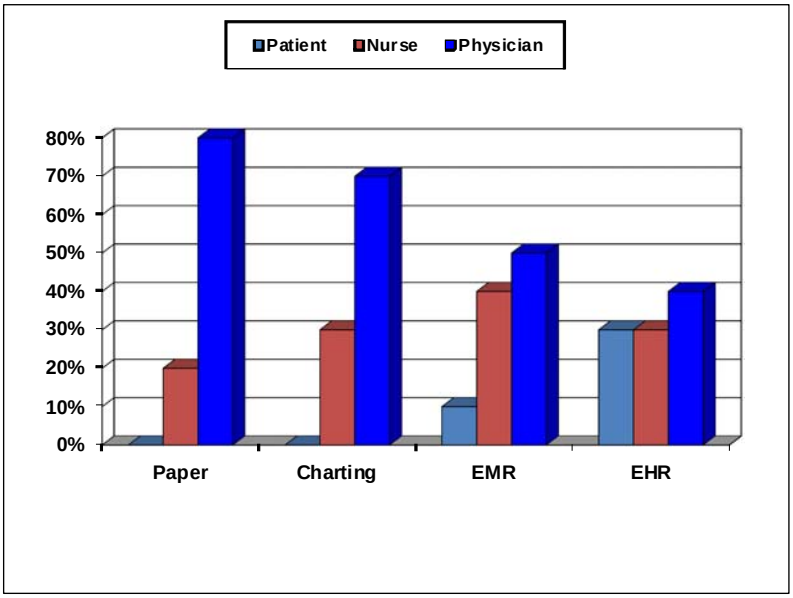
Of course, the EHR vendor community claims that EHRs does same time looking for data, organizing data, and transmitting data to other parties. But the EHR vendor community has failed to understand that the staff performs this work and yes, a fully deployed EHR can save on average 32% of non-direct patient care activities for MAs and Nurses. Additionally, once an EHR is fully deployed, the clerical staff workflow changes, thus reducing clerical work by up to 49%. Finally, EHR vendors have claimed that a fully deployed EHR can improve coding, and thus reimbursement. Assuming all of these assumptions are correct and an EHR can improve reimbursement by 3% to 6% and save staff time, is the savings really worth an increase of 3 hours per day in charting time? Our physician focus group responded clearly - NO. Physicians do not want to become data entry clerks – we must move the majority of data entry to the lowest cost entity based on proven skill levels.

The other factor than is left out of all sales presentations is that when you go live on your EHR, there is no electronic data store in the EHR on your current patients. Day 1, all patients are new to the computer system and even a patient that has been seen for three years is "new" since there is no data in the computer. The typical physician with 5,000 active patient records has a room full of paper charts, with extensive information about the patient buried in pounds of paper. How does the physician get the valuable patient clinical data into the EHR? The typical answer: Type the information in or scan the paper documents into the EHR. Of course scanning creates no discrete data and typing information about the past 3 years of clinical findings for every patient is cost and time prohibited. So how can we embrace EHR adoption given the decrease in physician charting productivity? The answer is a simple one, we must embrace "clinical and operational transformation" and modified our data entry techniques and accept a notion that data can be obtained via electronic interfaces, clinical data interoperatability, and a new concept that allows the patient and/or the nurse/MA to enter specific clinical information about the patient following the physician's pre approved clinical guidelines.

The movement to nationwide adoption of EHRs has slowed in recent months. After 20 years, the true adoption rate of EHRs has only captured 4% of the active physicians in the US marketplace with an additional 13% using portions of the EHRs functionality. However before we condemn the EHR, we need to consider a few of the operational barriers that have slowed adoption. Two of these barriers are the lack of electronic patient information embedded into the EHR when a practice goes live and the other related top the amount of time it takes to enter information into an EHR compared to dictation and or handwriting. Let's look at these two issues in more detail.

Data Entry Methodologies:

When evaluating data entry methods, we need to start with electronic data transfer from other sources. Let's start with basic information about the patient's demographics and insurance information. This is the easiest form of data entry. Given that 98% of practices already have a Practice Management System (PMS); physicians should require the EHR vendor to transfer all patient demographics and insurance information over to the EHR. Additionally, since the PMS application also maintains visit dates, CPT and ICD-9 codes, physicians should require the EHR vendor to convert visit level data into identifiable Discrete data showing patient visit dates tied to the appropriate diagnosis codes and any procedures code, not related to the office visit level. Using this methodology, a patient's clinical record could be pre-populated with dates of services, problem list and prior medical history information.



The second form of data entry should be to require the EHR vendor to download specific patient clinical laboratory results from local labs, Lab Corp and Quest. In most regions, laboratory organizations are required to maintain 2 years worth of patient clinical laboratory results. If the EHR vendor could download the last two years of patient specific laboratory results, following LOINC code matching criteria, 27% of necessary clinical data could be available electronically on the first date of go-live, saving the average practice over 156 hours of data entry time per physician.

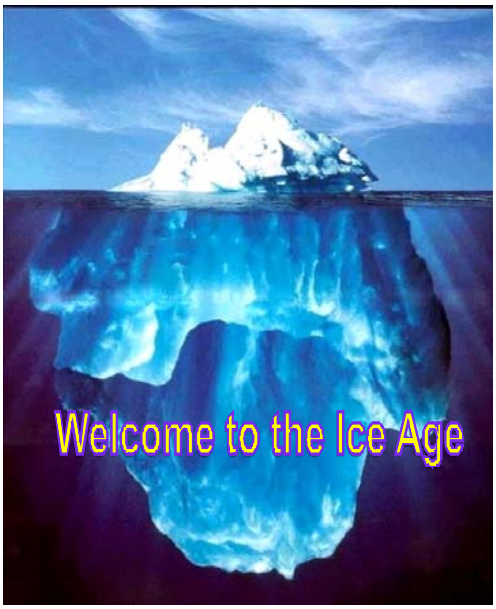
The same methodology would work for "active and prior medication history". Using the SureScripts network, the EHR vendor could obtained a patient's prior medication history, assuming that the medication was paid for by their local Healthplan. Given the number of prescriptions maintained in the Surescripts network, we estimate that more than 73% of prior medications could be electronically entered into a practice's EHR database before go-live. This methodology could save the average practice more than 141 hours of data entry time.

The next data entry method is via the practice's EHR personal health record (PHR) module. When a patient checks in at the front desk, the registration clerk asks the patient to fill out numerous forms including family history, social history, and medical history. Instead of having every patient fill out the forms when they are in the patient waiting form, practices could ask the patient to fill out the same information via the practice's website or via a Kiosk located within the practice. Via electronic entry, the practice transfers the data entry work from the practice to the patient, thus moving the cost for data entry from the practice to the patient. Following electronic programs like "Instant Medical History", (http://www.medicalhistory.com) are designed for simply interface with more than 40 EHR products, the practice can direct the patient to a site where discrete data can be capture and imported into the practice's EHR seamlessly without the practice touching the keyboard. The patient clinical questionnaires would, be designed by each specific practice based on clinical protocols and physician specific guidelines.

Once the patient has filled out the practice's questionnaires, the nurse or MA can capture information on chief complaint, allergies, prior medical conditions, vital signs, active medications, recent medical and social changes in the patient's life, etc. Additionally, practices that have experienced successful EHR implementations and move the data entry of Review of Systems (ROI) and the patient's current History of Present Illness (HPI). In these cases, nurses and MAs have been trained to follow the physician's clinical protocols and guidelines, also known as clinical templates, for the capture of specific discrete data on ROI and HPI conditions. This once change in data entry methodology has saved the physicians over 100 hours of data entry time per year.

Of course one of the best methods for discrete data collection is Electronic Health Interchanges (EDI). If discrete patient data has been collection by one provider, why does anyone need to re-enter the data a second or third time. We must move towards an Integrated Community EHR (ICE) where data can be collection once and seamlessly transferred to all providers that have rights to obtain the patient's specific clinical data. If the patient is treated by a family physician and then referred to a specialist, we must demand that all clinical pertinent data be transferred from one practice's EHR to another practice's EHR. Can EHR vendors accomplish this? The answer is a clear YES. Following the government's CCD data exchange standard, vendors can provide discrete data sharing between products and between practices saving the average practice more than 200 hours of data entry work per year per provider.

7. Beware, the ICE AGE is coming



C. Peter Waegemann's July 2008 article highlighted the need for sharing of codified data between multi practicing physicians. To help resolve this issue, AC Group has coined a new term– **I**ntegrated **C**ommunity **E**HRs (ICE). ICE products are designed for community systems, including hospitals, MSOs, and IPAs where there is a desire to create a community integrated patient record no matter where the patient is treated. These products may have full EHR or EMR-Light functionality. These products must provide and maintain a community health record via a community clinical and demographic data exchange. Advanced functionality includes reporting and tracking of orders, results, e-Rx, allergies, and problem lists, among others. The product must provide a community master patient index, based on numerous inputs, including hospitals, health plans, and numerous physician practice management systems. ICE products have the ability into interface with multi EHR vendors following that national CDA standard. With changes in the Stark Law, hospitals and other community initiatives are interested in viewing ICE applications that allow for five (5) operational models:

1. All physicians are employed by one organization using one product
2. Employed physicians and community physicians all purchase different products and share data via the government's new CCD interoperatability standard. (Passive Mode)
3. Employed physicians and community physicians sharing one PM and EHR Database. Security and access is controlled within the software
4. Employed physicians and community physicians shared one open clinical data base but have separate PM databases.
5. Employed physicians and community physicians have separate databases

Under all five of these models, an ICE product allows multi practices to share information regarding the patient even though the practices may have different EHR product. To insure an effective community EHR, the product of choice must have the following capabilities:

- Community Master Patient Index (MPI) for retrieving of patient and insurance demographics
- One interface between all 3rd party companies (Lab Corp, Quest, PACS, Hospitals) while allowing the sharing of interface costs between all practices
- Patient Demographics Information where an address change can update each practice's database.
- Patient Insurance Information shared between all practice's databases.
- Patient Family, Social and Medical History that can be updated by one provider or patient with auto update to all practices.

- Potential of Centralized Billing and Accounts receivable with multi Tax IDs
- Reporting as individual databases and the ability to report clinical data over the entire community
- Referral tracking between multi Tax IDs
- Community Patient Portal, Community Physician Portal, and Community Registry reporting
- Allows practice to leave the community and remove their database without adversely affecting the community EHR repository.

Benefits of an ICE Age strategies:

- Data is entered once and can populate multi databases
- Patient has complete control over disseminating of clinical data following HIPAA rules
- 92% reduction in duplicate data entry.
- 74% reduction in overall data entry time.
- 19% reduction in clinical testing.
- 32% reduction in referral tracking activities
- Reduces uncompensated ER Cost by as much as $500,000 for every 20,000 emergency room visits. Study conducted by AC Group on 3,120 ER visits determined that if clinical data was available to the ER physician at the time of treatment, the ED physician could properly treat the patient faster and with fewer tests.
    - Patient time in the ED was decreased by 26%
    - Test costs were reduced by 31%
    - Cost reduced $500,000 for every 20,000 Emergency Room Visits.

All of these options will save time and money, however, the best method could be combining an EHR with a new functionality that AC Group as coined as ***"DRT"***. DRT stands for Discrete Recordable Transcription. To insure EHR implementation success, physicians should be searching for DRT enabled EHRs.

8 Discrete Recordable Transcription (DRT)

The concept of a DRT enabled EHR is simple. Physicians that dictate their clinical note should be allowed to continue to dictate their findings and clinical assessments in their own words, but the transcribed output should be entered directly into the EHR as Discrete recordable data. Under this methodology, a physician does not have to change the way they practice medicine and change the way they interact with the patient. Following a common protocol, a physician would review the electronic chart before entering the room with the patient – following the same workflow as today. Instead of reviewing a paper chart, the physician would review electronic clinical data that has been created via the data entry methods we mention in the prior section (data conversions, data interfaces, data entered by the patient or nurse, ICE, etc). After reviewing the information, the physician talks to the patient, performs the required physical exam, and discusses his/her clinical interpretation and clinical plan with the patient. The physician then dictates their findings and plan directly into the EHR as an electronic wave file. Once completed, the wave file is transmitted to a local or remote transcriptionist for electronic transcription. Since 63% of the typical transcription is already gather electronically via the various data collection methodologies, the cost for the creation of the final note is cut by more than 50% - an average of $6,000 per year per physician that has elected dictation over hand written notes. More importantly, the transcription comes back into the EHR as Discrete clinical findings, thus improving clinical documentation, coding, and outcomes. Basically, via a DRT enabled EHR, physicians that have elected to dictate in the past can continue to dictate, can cut their transcription costs in half and can still generate a clinical note via the EHR.

9 Electronic Medical Records: Client/Server or ASP?

When buying Electronic Medical Record (EMR) Software which is better ASP or Client/Server? Unfortunately there is no right answer. You'll need to decide what's important to your practice and what's not. In this article we'll explore the advantages and disadvantages of each model so you'll be able to make an educated decision when the time comes to purchase an EMR software solution.

ASP is a remotely hosted software system accessed via an internet web browser, similar to the model used in online banking. This remotely hosted system is accessed by paying a rental or service fee. The server is secure and HIPAA compliant and is not located in your office. All technical aspects of the server are managed by a professional IT company, and you pay a monthly access fee (or per occurrence fee) for the services of this IT company. The cost of an ASP-based system is relatively low in the beginning, however because the fees never stop the cost over the long term adds up and is usually ends up being more expensive than using a Client/Server-based system. One of the other benefits of the ASP based system is that almost all computing is done on the remote server, thereby reducing the minimum computer hardware requirements on the clients/workstations. ASP allows you to access all of your information at any time, from any place with internet access. Like all comparisons with advantages come disadvantages. Loss of customizability; the host server is being accessed by many different users. Although your data is secure, your individual customized needs are not met as readily as you may desire. One of the other disadvantages is that an ASP system does not move as quickly as a Client/Server system. This is and important factor to consider with point n' click intensive Electronic Medical Record software as vital time may be lost by waiting for data to transfer over the internet; these seconds can quickly add up to minutes and hours of a couple weeks time. Accountability issues are a deep consideration to ASP. Company service degradation is felt more acutely and such things as vendor bankruptcy could have a more drastic impact on the practice as a whole. Periodically check the stability of the EMR software vendor, and ask for a backup copy of your data for your own records.

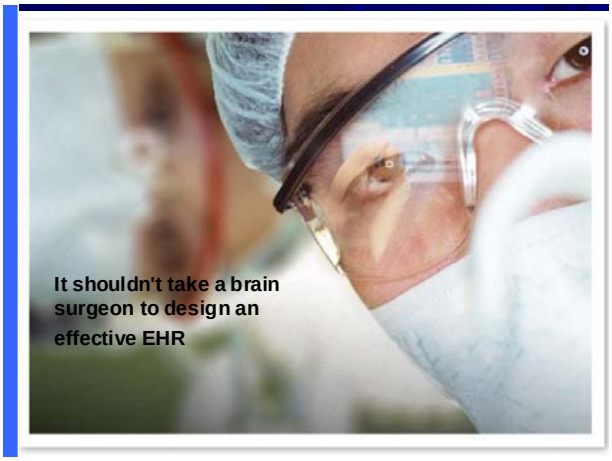
Client/Server models allow for quicker response times in the application as the data from the server to the client is transmitted much faster (usually 100 Ambits/second). The newer client/server products developed in Java and Microsoft .Net are capable of offering the "best of both worlds" as they have the speed of a local system plus the accessibility from a remote location. Where traditional client/server products required practices to use MS Terminal Services or Citrix technology to access their data from remote locations, these newer systems can be accessed from any internet browser. Client/Server also boasts the benefits of practice having the control over their data. However with this control comes responsibility; the responsibility of being responsible for your data as you are now open to the risk of theft, fire, hard-drive failure and data corruption.

Many IT futurists consider ASP based systems to be the future however many offices find they don't have the need for remote access and don't want to put their data in the hands of another company making client/server systems still a popular option. In most cases, if an office has multiple locations an ASP system should always be considered but if an office requires high-performance and doesn't have multiple locations the client/server system may be the better option. Speak with your IT consultant and the software vendor to get all the facts you need to make an educated decision.

10. Setting the Standards for Integration

Over 1,000 companies in the market today provide technology solutions for practices. They are all generating a different type of solution and generating many questions for you, the consumer. Relatively few have the long-term vision of being a complete solution. Advances in hardware and software are bringing technologies focused on patient care to the forefront. Technologies such as Prescription Modules, Diagnostic Programs, Document Imaging Systems, and Computerized Patient Records are more readily available and are being offered by a multitude of companies all touting to be the best.

As technology continues to develop at an exponential rate, how do you know your investments today will still be viable tomorrow? How do you know you won't wind up with a Beta Recorder in the corner when the rest of the world has embraced the VCR? The questions are numerous: what to buy, when to buy and how to make it all work together. And behind these concerns lies the ultimate question: Who is going to deliver the complete solution? Because of so many options, no one company has provided a complete solution. The solution will come from integrating the best-of-breed packages that serve your individual needs.



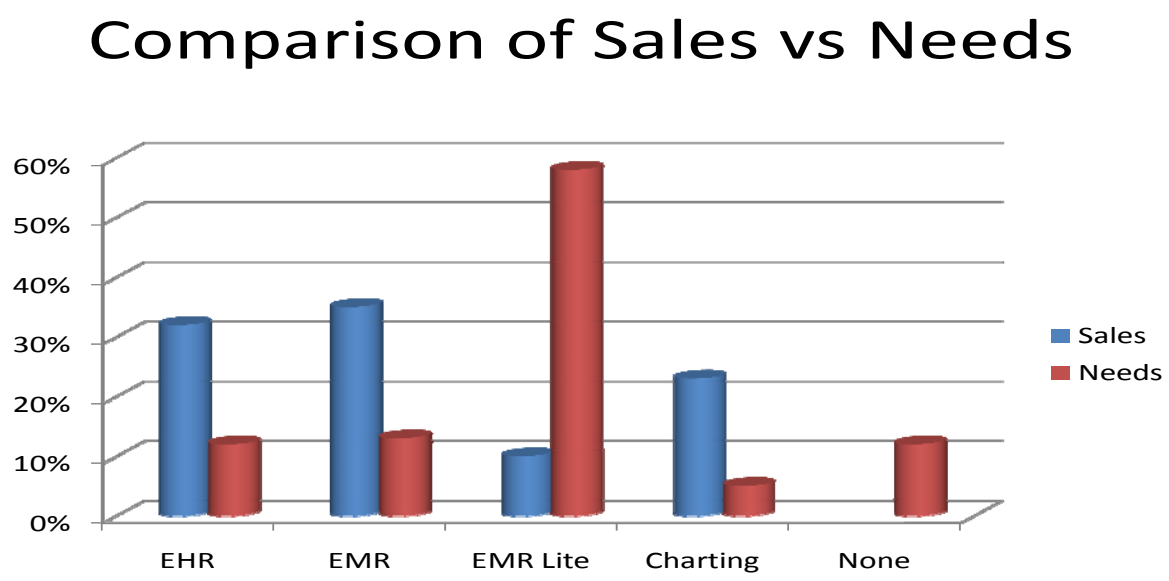
And at the heart of the integrated solution will lay the key communication tool of the medical practice: the patient record. In all of the stages in dealing with a patient, from the initial patient encounter to when the insurance company sends the check and everything in between … in all of these stages, there is one communication tool that is present … the patient chart.

That won't change in 2009. Our method of accessing the chart may change, and, we expect, will become more efficient. But the chart will remain the center of the process, because in healthcare, the patient will always be the center of why we exist.

11. What type of product are physicians buying?

Before you go out and purchase a new EHR software application, you need to understand what type of EHR you really "need" and then determine the actual initial costs for the application, the on-going costs for the application, and these hidden costs that practices have experienced during the last 24 months. To help understand the issues, the AC Group has created this paper on the different types of EHR applications. To view other white papers on subjects like the potential Return on your EHR Investment (ROI) go to http://acgroup.org/research/whitepapers.html.

Along physicians have been purchasing EHRs for 30 years, the type of EHR has changed over time. Back in the 1980's and 1990's, the EHRs were really nothing more than base line charting systems – allowing the physician to type clinical information into a form with no clinical alerts or clinical decision support. Since 2000, more than 250 vendors have started offering comprehensive EHRs with advanced functionality. Based on our 2008 purchasing statistics, physicians are still purchasing EMR applications, but the majority would prefer to purchase an EMR Lite product.



Through AC Group's research, we have learned that, while having the appropriate level of functionality is critical, providers require a vendor that will support and continue to develop the product. Therefore, the **2008 report employs a point system based on a combination of the following major sets of criteria: functionality, company size, client base, end-user satisfaction and price.** This point system provides a more

comprehensive view of the ability of the end-user to derive benefits from the product. Each set of criteria has been weighted, and each vendor was assigned a "Total Weighted Point Value".

Additionally, in the 2009 report, AC Group divided the rankings based on the following product types:

- **ICE (Integrated Community EHRs)**
- **EHR Products (Electronic Health Records)**
- **EMR products (Electronic Medical Records)**
- **EMR Lite Products:**
- **Charting Products**
- **Document Imaging Management (DIM) Products**
- **FQHC Products**
- **Integrated PMS and EMR Products**

When evaluating different products, the average practice must determine what type of product they really need. One methodology was developed by AC Group, Inc. which helps to determine the level of functionality a practice needs today and in the near future. You can access the survey document at http://acgroup.org/surveys.html. The challenge for all practices is that every vendor states that they have the best product and their product is perfect for your practice. Can you believe every vendor? Probably not, since each vendor provides a different compliment of functionality. Many vendors pretend to have great technology, pretend to have functionally rich software, and pretend to be the best product forever practice. Based on AC Group's functionality ratings, products have ranged from a rating of 28% to 95%. Therefore, the products are not the same – even though they pretend to be the same.

12. Types of EHR Products

To assist practices, AC Group has provided a brief description of each of the product categories:

- **ICE Products –** A new category was added for the August 2008 report – **I**ntegrated **C**ommunity **E**HRs (ICE). ICE products are designed for community systems, including hospitals, MSOs, and IPAs where there is a desire to create a community integrated patient record no matter where the patient is treated. These products may have full EHR or EMR-Light functionality. These products must provide and maintain a community health record via a community clinical and demographic data exchange. Advanced functionality includes reporting and tracking of orders, results, e-Rx, allergies, and problem lists, among others. The product must provide a community master patient index, based on numerous inputs, including hospitals, health plans, and numerous physician practice management systems. ICE products have the ability into interface with multi EHR vendors following that national CDA standard. With changes in the Stark Laws, hospitals and other community initiatives are interested in viewing ICE applications that allow for five (5) operational models:

    - All physicians are employed by one organization using one product
    - Employed physicians and community physicians all purchase different products and share data via the government's new CCD interoperatability standard. (Passive Mode)
    - Employed physicians and community physicians sharing one PM and EHR Database. Security and access is controlled within the software
    - Employed physicians and community physicians shared one open clinical data base but have separate PM databases.
    - Employed physicians and community physicians have separate databases, but they are able to share the following data:
        - Community Master Patient Index (MPI) for retrieving of patient and insurance demographics
        - One interface between all 3rd party companies (Lab Corp, Quest, PACS, Hospitals) while allowing the sharing of interface costs between all practices
        - Patient Demographics Information where an address change can update each practice's database.
        - Patient Insurance Information shared between all practice's databases.
        - Patient Family, Social and Medical History that can be updated by one provider or patient with auto update to all practices.
        - Potential of Centralized Billing and Accounts receivable with multi Tax IDs
        - Reporting as individual databases and the ability to report clinical data over the entire community
        - Referral tracking between multi Tax IDs
        - Community Patient Portal, Community Physician Portal, and Community Registry reporting

- Allows practice to leave the community and remove their database without adversely affecting the community EHR repository.

- **EHR Products** – Full EMR capability, with internet-based Personal Health Records, health maintenance tracking, proven interoperability with other EMR vendors, national clinical standard couplers, and clinical decision support with nationally recognized alerts, etc. The application must have interfaces to multiple Practice Management Systems. These products usually sell between $10,000 to $20,000 per provider.

- **EMR Products** – Full charting and Document Imaging Management, along with e-Rx with formulary tracking by health plans, automated E&M coding and verification, medical necessity checking by CPT and Diagnostic codes, comprehensive orders and results reporting, with integrated workflow routing and tracking. The application must have interfaces to multiple Practice Management Systems. An EMR has the ability to replace the entire paper records via a clinical documentation system for Social History, Family History, Medical History, Vital Signs, HPI, ROS, Physical Exam, Orders, Education materials, along with the ability to create a customized clinical note, referral letter, and a patient take-home instruction letter than includes required patient education. These products usually sell between $5,000 to $15,000 per provider.

- **EMR Lite Products:** Vendors that meet many of the operational and clinical requirements, but many not have all of the functionality of the full EHR/EMR vendors. Additionally, many of the ICE products also include an EMR Lite product for those providers who are not willing to jump into the EHR marketplace today. Many of these vendors are designed for specialty practices that do not require CDS, KBM, Health Maintenance alerts and formulary compliance. In most cases, the majority of the data is entered by non-physicians and physicians use the EMR Lite to review information about the patient, but ***do not use*** the EMR Lite for recording of HPI, ROS, and Physical Exam. This allows the physician to maintain their current charting system and processes while still having the ability of creating an electronic "paper chart". The goal of an EMR Lite is to provide base-line e-Records without forcing the physician to change their current methodology of recording clinical findings. These products usually are offered at under $5,000 or in an ASP hosted model with cost between $100 and $200 per month per provider. The only problem, more than 62% of physicians have indicated that they prefer to start with an EMR Lite product instead of the comprehensive EHR products that are now CCHIT certified. We believe that the healthcare market will change by 2013, requiring most physicians to use a comprehensive EHR. However, the majority of physicians could start with an EMR lite product today and convert to a true EHR by 2012-13. So where does a physician start? Let's start by looking at the typical EMR Lite marketplace functionality.

- Connection to patient demographics from current PMS or a new PMS integrated with EMR Lite
- Patient Tracking
    - Who is scheduled today
    - Who is check-in
    - Who is with the nurse/MA
    - Who is with the physician
    - Who is ready for check-out
    - Who has left
- Patient Time Tracking
    - How long as the patient been waiting
    - How long was the patient with the provider
- Patient Summary page with:
    - Patient age and sex
    - Current Meds
    - Current lab results
    - Health maintenance alerts
    - Allergies
    - Prior acute and chronic diagnoses
    - Prior visit dates and who treated the patient.
- Document tracking, storage, and retrieval
- Documents Imaging
- Bubble sheets Discrete data capture to collect patient history, HPI, via check boxes
- Lab interface with Discrete data
- eRX – orders, alerts, formulary
- Optional orders management for lab and x-ray via super bill or orders sheet
    - The handwritten orders would be scanned into the system
    - Discrete orders are captured via OCR, bubble sheet, or e-Pen
- Charge capture via electronic super bill
    - The e-supper bill generated by the computer before the visit including barcode for patient ID

  - At the completion of the visit, the Physician checks off boxes and handwrites
  - The document is scanned into the system at check-out
  - Discrete CPT, office visit and Diag codes are captured via OCR, bubble sheet, or e-Pen
  - Coding is transferred automatically to billing system
  - Does NOT include auto E & M coding
- Hand-written notes capture, storage, and Retrieveability
- Dictation capture and/or Voice to Text using Dragon
- Option for patient Personal health record so that patients can:
  - Pre-entry demographics data
  - Pre-entry of social, family, and medical history by patient or family
  - Lab results reporting and review
  - Request eRX refill
  - Request appointment.

Basically, an EMR Lite application automatics the front office and the nursing/MA activities, but does not change the physician's workflow. You can create a digital stored chart, but the physician can view prior information about the patient via a computer terminal before walking in to see the patient or the staff can print out a 1 to 2 page summary about the patient for each visit.

After and/or during the visit, the physician continues to handwrite the note via an electronic pen and continues to dictate if they use that option. Basically, the physician treats the patient the same way and captures the clinic visit information the same way. The only change is the type of pen and paper. Once the visit is completed, the dictation or the handwritten note is scanned and stored into the patient electronic file for retrieval at a later time by Business Office staff and/or clinicians. Now the challenge is to find vendors that that can create a true EMR Lite application – not just a charting system.

- **Charting Products** – Ability to simplify the charting requirements, as specified by many of the medical societies and the IOM. Advanced functionality must include orders and results reporting, problem list and e-Rx tracking. The product does NOT have to have advanced nationally recognized alerts and clinical decision support. The application must have interfaces to multiple Practice Management Systems. An charting product has the ability to replace the entire paper records via a clinical documentation system for Social History, Family History, Medical History, Vital Signs, HPI, ROS, Physical Exam, Orders, Education materials, along with the ability to create a customized

clinical note, referral letter, and a patient take-home instruction letter than includes required patient education. The main difference between a charting system and an EMR Lite is that the charting system creates the clinical note, but requires the physician to change their current methodology for recording and reporting data. The main difference between a charting system and a full EMR is that the charting system usually does not have automatic clinical alerts, clinical decision support, KBM products, and in many cases, they do not have eRX and LONIC compliant Lab interfaces. These products usually range in price from $995 to $2,500 per provider.

- **Document Imaging Management (DIM) Products** – Ability to scan and store paper documents by patient and by sub-folder, along with the ability to electronically receive and file documents that are received either electronically or by fax, including Lab results, transcribed reports, and hospital ADT information. The DIM must have integrated routing and workflow capabilities and interfaces to multiple Practice Management Systems.

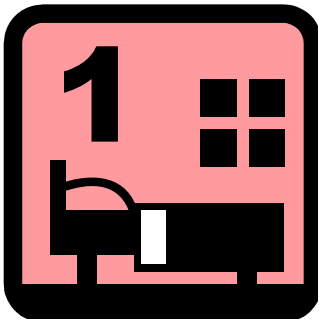
- **FQHC Products** – In May of 2006, AC Group added a new category for Federally Qualified Health Centers (FCHC) since these centers require more government reporting and clinical oversight.

- In May of 2005, ACG added also a new category for **Integrated PMS and EMR Products** – Our research has shown that more than 72% of the selections in 2005 have been for both Practice Management and EMR/EHR applications. Starting in 2005, ACG started tracking those vendors that provide a tightly interfaced or integrated solution.

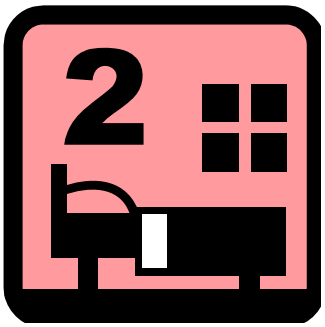
So where do you begin?

First, with almost 400 EHR vendors in the marketplace, you need to decide what "type" of EHR you are looking for. Start by determining what level of functionality you really "need". Then determine how you want the product to interact with the administrative functions of your practice. Let's start with functionality. The following pages describe 5 different levels of full EHR functionality.

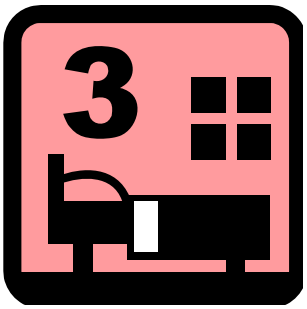
- ***Level 1*** – An EHR that allows the provider to scan documents into a file or a series of sub -folders by patient name and/or number. The software also comes with the ability to record patient related clinical information via voice dictation, typing, and hand writing following either a template design or a blank e-form by clinical category. No data integration with outside laboratories. No provider order entry and no auto results reporting. Software allows recording of E & M codes, but the E & M code is not suggested based on the data entered. Patient prescriptions can be printed, but there is no knowledge base for drug alerts and formulary compliance. The software does not provide point of care clinical decision support.



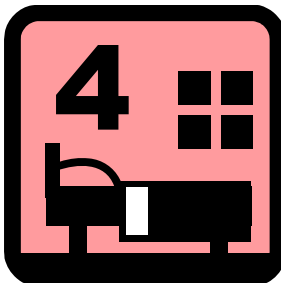
- ***Level 2*** – An EHR that meets all of the requirements of level 1 plus the ability to capture patient family, social, and medical history using a defined format that can be shared with other practices as we more to common standards such as CCR and CCD. Software provides base-line tracking of orders and health maintenance alerts. Software provides lab ordering and results plus 2-way orders and results reporting with specific laboratories. Product checks for medical necessity, checks healthcare plan for ABN requirements and prints ABN if required. Ability to view lab results in a flow sheet over time and the ability to graph labs results over a period of time. Software provides base line eRX charting of prior medication ordered by the health service provider, ability to order new medications, ability to print prescription in the office. No drug alerts are provided. Software provides base line alerts and clinical support based on the EHR vendor's clinical databases



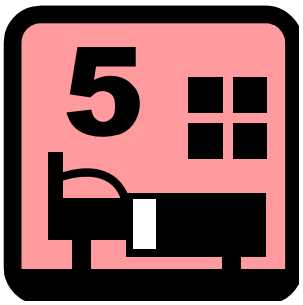
- ***Level 3*** – An EHR that meets all of the requirements of level 1 and 2 plus the software provides base line charting with practice specific clinical alerts. No national alerts or guidelines are required. Simple documentation following templates that can be modified by the practice and by the individual provider. Base-line Orders and results reporting capability. Software provides Patient Summary page including the ability to review prior visit reasons, active medications, active la b results, next appointments, etc. Software provides advanced eRX documentation, drug alerts that are updated by the EHR vendor (no national standard alerts), ability to electronically send prescriptions to specific pharmacies. Includes the medication history of client ordered by service provider AND other medical providers outside the clinic. Software provides advanced clinical orders capability based on national guidelines and follows medical necessity checking. System tracks all orders and indicates when an order result is past due. Software provides alerts and CDS plus advanced features based on my specific customizable guidelines. Software provides advanced E & M, coding guidelines designed to insure that the actual charges match the clinical charting.



- ***Level 4*** – An EHR that meets all of the requirements of levels 1 through 3 plus software provides advanced pre-built templates that can be customized by either the vendor or the practice based on specific practice requirements. Documentation follows national guidelines like CCD, SNOMED, and CCHIT. Software provides advanced Patient Summary page plus strong health maintenance alerts, prior vitals, patient messages, chronic diseases and other patient specific information. Software provides advanced, practice customized 2-way laboratory interfaces with companies like Lab Corp and Quest along with order guidelines based on practice preference lists and patient condition. Results are automatically posting in patient chart and a note/message is sent to the provider/nurse based on practice alerts guidelines. Software tracks all order tests and alerts practice if tests are not back within a specific timeline. Software provides advanced eRX with nationally updated drug alerts based on multi parameters, insurance specific formulary compliance following companies like RXHub, pre-authorization alerts, and personalized eRX preference lists by provider. Ability to transmit eRX via SureScripts to the patient's preferred pharmacy. Software provides advanced orders and results based on practice guidelines and national best practices based on the patient's condition. Health Maintenance alerts are automatically provided based on patient conditions and orders are pre-identified based on national guidelines. Software provides advanced alerts and CDS based on national recognized sources that are updated on a routine basis. The alerts must include drug alerts, clinical best practices, health maintenance alerts, and disease management guidelines. Software provides advanced charge capture for both nurses and physicians following the 1997 E & M coding requirements. System tracks the number of points per E & M coding category and provides the provider with a one page summary of the appropriate E & M code.



- ***Level 5*** – An EHR that meets all of the requirements of levels 1 through 4 plus Software provides advanced documentation; nationally recognize templates based on best practices, clinical guidelines, customizable to physicians practicing patterns. Product provides hyperlinks to outside clinical knowledge databases, problems are linked to orders. Ability to view summary information regarding the patient's conditions on one customizable screen. Documentation follows national guidelines like CCR, SNOMED, and CCHIT. Ability for patient to enter data via a kiosk or via on-line web-based personal health record. Patient Summary page plus the ability to customize the page based on the physician's and practice unique needs. Lab orders based on best practices and national guidelines. Receiving lab orders electronically, ability to have the data automatically posted in a flow sheet, ability to graph data results over time. Can visually compare labs results to eRX. Ability to combine results from different labs using the same format. Software provides advanced, nationally recognized, practice customized eRX with the ability to create customized preference lists based on the clinical findings of the patient. Ability for the patient to request eRX refills via secured web site. Ability to track when a patient does NOT pick up their medication from the pharmacy. Software provides advanced, nationally recognized, practice customized advanced clinical orders and results reporting that are based on national best practices and national accepted standards. Orders are driven off of patient's condition, personal preference lists, and advance features. Software provides advanced, nationally recognized, practice customized alerts and CDS that can met all current and future guidelines via simplified advanced reporting or building of a new alert template. Software provides advanced, nationally recognized, practice customized E and M coding tied to the patient's specific healthcare plan for maximizing charge capture via pre-authorization alerts and guidelines. System provide advice in charge capture based on best practices, practice guidelines and reports variances from guidelines. Software provides advanced, nationally recognized, practice customized clinical reference content with clear labeling of the levels of evidence for facts/assertions and grades of recommendation for recommendations made, and these levels and grades are clearly and transparently based on the quality of the underlying evidence using reproducible processes.



13. Certification Commission for Healthcare Information Technology (CCHIT).

The Certification Commission for Healthcare Information Technology (CCHIT®) has gained substantial momentum since the organization's founding in 2004. As a result, buyers of electronic health records (EHRs) – or electronic medical records (EMRs), as they are also known - often ask me what role CCHIT certification should play in their purchase decision. The answer is not always simple, so I decided to explain what CCHIT is, what it is not, and why some participants have passionate views for or against it.

What is CCHIT?

To help enable the development of common standards, three leading industry associations in healthcare information management and technology – AHIMA, HIMSS, and The Alliance (formerly NAHIT) – have joined forces to launch the **Certification Commission for Healthcare Information Technology (CCHIT).** CCHIT (founded in 2004) is a private, non-profit organization formed to certify EHRs against a minimum set of requirements for functionality, interoperability and security. CCHIT was subsequently funded further by the California Healthcare Foundation and a group of payers (e.g. United HealthGroup), providers (e.g. HCA) and software vendors (e.g. McKesson). In 2005, CCHIT was granted a $2.7 million contract by the Department of Health and Human Services (HHS) to support its mission. A number of other medical associations have since supported CCHIT. Despite the HHS contract, CCHIT is not an extension of the federal government.

What are the benefits of CCHIT?

According to the Government and leading healthcare visionaries, CCHIT is performing an important role in defining EHR functionality and promoting standards for EHR interoperability and security. While most healthcare participants agree that moving medical records to an electronic format is important, there is little consensus on what should constitute an EHR and how those systems should securely share data. The problem is complicated by the large number of EHR products (~400), an unending barrage of marketing claims and the unfortunate reality that many EHR implementations fail.

CCHIT has taken on the task of defining the key functional components of an EHR, how it should communicate with other systems and how it should protect patient information. The CCHIT criteria consist of a list of detailed product capabilities against which EHRs are evaluated. At the very least, CCHIT has created a functional requirements checklist for EHR buyers. Adopted in full, CCHIT has provided buyers with a list of EHRs that meet every one of these requirements.

Why does CCHIT generate some controversy?

As CCHIT gains momentum, many EHR buyers are using its certification as a filtering mechanism for which EHR products to include in their selection process. Moreover, many payers, associations and healthcare information exchanges (HIEs) are also mandating CCHIT certification in various ways. This, of course, is CCHIT's intended role. Software vendors that are CCHIT Certified® like this trend because it is more likely their products will be included in those purchase decisions. Non-certified vendors hate it because it eliminates them from those opportunities, even if their product could have been a good fit for the provider. In fact, according to AC Group's 2008 study on EHR buying patterns, 81% of all new EHR sales went to CCHIT certified vendors The most intense detractors, including non-certified vendors and physicians that believe that CCHIT requirements are not necessary for base health, have labeled the organization an anti-competitive "cartel" that forces small vendors out of the market. Of course when you look at the vendors that are certified, 56% would be listed as small EHR vendors with less than 500 physicians using their product. Both supporters and detractors of CCHIT make logical arguments as to what role CCHIT certification should play in EHR selection processes.

Why doesn't every vendor just get certified?

It's not that easy. Many non-certified vendors object to the cost the certification fees - $24,000+ for the initial review and $4,800 in annual maintenance fees over the three-year certification. CCHIT charges those fees to support its staff and compensate the jurors that perform the EHR product reviews. Of course, the testing fee is not really the issue. The real issue is the cost of developing the CCHIT-required product capabilities. The cost of developing some features could cost hundreds of thousands of dollars a year, depending on the effectiveness of the vendor's development team and the extensibility of the underlying software code. We continue to hear from non-certified vendors that their clients are not asking for the additional functionality that CCHIT measures. Of course my come back is, "did you ask your client if they would like the additional functionally"? The typical answer is no, we know what are clients want and they do not want CCHIT functionality. I am always amazed by this answer. Especially when you interview physicians about advance capability like drug alerts, national order sets, ability of interoperatability, etc, the traditional answer is "YES", I would like the additional functionality – if it does not slow me down and does not cost money. The vendor's decision to try for certification or not also depends on the current product's foundation and certain vendor's deliberate strategy to offer a lightweight, easy-to-use EHR for simple SOAP notes and patient records. While these "charting" products meet many of the current

requirements of a large segment of the ambulatory market, it would not meet the broad set of functional requirements that will be required by 2012 when P4P and national Guidelines for reimbursement changes from a fee-for-service methodology to a pay-for outcomes methodology.

What criteria does CCHIT use to certify EHRs?

As of December 2010, CCHIT certifies EHRs based on about over 300 criteria spanning EHR functionality, interoperability and security. These criteria start with basic functions like creating and managing a patient record in a simple SOAP format including the capture of base-line, patient family history, social history, medical history and clinical notes. CCHIT expands these basic features by requiring more advanced functions like pharmacy drug alerts and Sure Script certification along with laboratory integration requiring LOINC compliance to insure flowcharting of laboratory results based on different results formats. These advanced capabilities are projected to improve provider efficiency and quality of patient care throughout the US. Additionally, an EHR product must pass all CCHIT-required capability. CCHIT is all or nothing test. You must receive a 100% rating, or you do not pass. There is no partial or feature-by-feature certification. Finally, the CCHIT certification changes each year and just because a vendor is certified in 2006 does not mean the same product will meet the newer 2007 or 2008 certification. Therefore, if considering CCHIT certification as part of your selection criteria, you should ask the EHR vendor if they are 2008 certified and if not, determine when they plan on receiving 2008 certification (testing occurs between July 2008 through June 2009). If they cannot give you a definitive answer, you might want to look elsewhere. Note: if a hospital or other entity is considering subsidizing the cost of EHRs for their community physicians, the Stark Law requires that the EHR product be certified within the last 12 calendar months.

What important criteria does CCHIT not evaluate?

As just noted, CCHIT certifies EHRs based on criteria for functionality, interoperability and security. At this point, CCHIT does not evaluate:

- ease-of-use of EHR software products;
- financially viability of the company offering the EHR software; or,
- The quality of customer support offered by the software vendor.

Does CCHIT evaluate specialty EHRs or templates for specialists?

Another important element of EHR selection is the product's ability to support specialties with unique EHR requirements. At present, CCHIT does not evaluate EHRs against the requirements of medical specialties. The organization does intend to begin evaluating EHRs for cardiology and pediatrics in 2008. However, it will take some time before CCHIT is capable of evaluating the full range of specialty EHRs or specialty templates.

We think this is especially important given that many specialty EHRs are developed by smaller vendors. Their addressable market opportunity is smaller, their development budgets are smaller and their product development prioritizes features required by the specialty. For example, a solo obstetrician will certainly be focused on how an EHR manages ante-partum visits, but may not be focused on a requirement for the system to support multiple physicians. CCHIT does not assess ante-partum templates, but it does require multi-physician support.

Will CCHIT result in higher prices for EHRs?

Critics often contend that CCHIT certification will lead to higher EHR prices because: 1) vendors will have to pass on the cost of certification and new feature development; and, 2) certification will limit competition by narrowing the number of competitive software vendors.

Regarding the first point, we think it is unlikely that vendors seeking CCHIT certification will be able to pass on their expenses to their customers. The market is simply too competitive. Instead, the vendors will likely bear the cost themselves in the form of lower profit margins. Non-certified EHRs may even have to lower their prices to remain competitive.

As for the second point, one hundred EHR vendors should be more than enough suppliers to ensure price competition. However, many of the current CCHIT Certified EHRs have traditionally been the more expensive products, in large part because they offer more features. If you want a CCHIT Certified EHR today, you may pay more. Over time, as more vendors build out CCHIT's required capabilities, products will gain functional parity and price competition will likely ensue.

Where CCHIT will affect pricing is if it leads to the elimination of low-cost or open source (i.e. free) EHR products that can't afford to clear the CCHIT hurdle. A low-cost provider strategy will not be possible if those vendors are forced to offer a fully functional EHR. The cost of developing a fully functional EHR is too high to sell the product at low prices.

Will a CCHIT Certified EHR improve my practice's income?

CCHIT claims to "open up the flow of HIT incentives from payers and purchasers." Indeed, CCHIT specifies the functionality needed to measure and report on those quality indicators required for pay-for-performance incentives. In fact, CCHIT is the only federally recognized certification body for EHRs and is therefore important to any physician practice seeking to participate in upcoming payment incentive programs from the Centers for Medicare & Medicaid Services (CMS). Meanwhile, CCHIT Certified EHRs qualify for a special exemption from the Stark and anti-kickback laws, so that local hospitals or health systems can subsidize a physician's EHR purchase. Non-certified EHRs can also meet the exemption, but CCHIT is a reliable means of ensuring the interoperability required for an exemption. Finally, some malpractice liability insurers offer discounts to providers that use CCHIT

Certified EHRs. Keep in mind, implementing a CCHIT Certified EHR is not the only path to achieving these benefits and it is not a guarantee that a physician will be eligible for each of these incentives.

Do I need a CCHIT EHR to participate in my local RHIO?

Regional Health Information Organizations (RHIOs) are playing an increasing role in mandating how payers and providers in a region share patient information electronically. In fact, there are recent examples of these types of organizations mandating that physicians adopt a specific EHR before "hooking up" with the exchange. For example, Partners HealthCare System in Massachusetts has required all of the physicians in its network to have adopted or agreed to adopt electronic health records by Jan. 1, 2008, or else they will be removed from the network. To retain their network status, about 5,000 physicians in the network were required to adopt either Partners' own EHR or another EHR from GE Healthcare – both of those EHRs are certified. Of course, that does not mean that all RHIOs will impose as strict a mandate, but the conservative buyer should certainly get a sense for their local exchange's EHR requirements before investing in a new system.

Conclusions and recommendations

CCHIT promotes that through their certification process, the organization "sets the bar for EHR products." We agree. However, we question if that bar has been set too high relative to most ambulatory care organizations' current requirements and IT capabilities. Even if a majority of EHR vendors achieve certification, will physicians follow by adopting the functionality specified in the CCHIT criteria? As we review the list of CCHIT Certified EHRs, we recognize many great software products. We see great benefit to the features specified by CCHIT. However, we can't help but wonder how long it will take for the traditionally "late adopter" physician market to accept and implement the requirements specified by CCHIT's technologically savvy Commission.

So, in the interest of serving our provider audience, here are five key takeaways for use in determining CCHIT's role in your EHR selection:

- Review the CCHIT criteria yourself and determine the relevance of each to your ideal workflow. The criteria are well defined, so even if you do not need every capability, you could select a subset for use in evaluating EHRs for your practice.
- Understand the binary nature of CCHIT certification. If an EHR does not fully address each of the CCHIT requirements, it will not be certified. Therefore recognize that there are many good EHRs that may not achieve certification, but may still meet your requirements.
- Consider the requirements of your specialty. If you need EHR capabilities specific to your segment of medicine, realize that CCHIT does not yet cover specialties. You have to evaluate specialty requirements on your own.
- Do your homework on other critical evaluation criteria that fall outside CCHIT, including: ease-of-use, customer satisfaction and vendor viability. CCHIT is very clear that these due diligence items are the buyer's responsibility.
- Understand the biases of both CCHIT proponents and detractors. It is natural for these industry players to have strong opinions, just be sure to put them in context, do your own research, and understand that the ultimate decision is yours.

14. CCHIT Certified Vendors:

As of January 1, 2011, 73 ambulatory EHR Products have been certified by CCHIT based on the 2008 and only 13 have been certified on the new 2011 criteria. However, there are 90 ambulatory EHR products that were certified in 2006 and 50 EHR products have been certified based on 2007 standards. Furthermore, we estimate that less than 30 products will meet the new ARRA 2011 CCHIT certification requirements since "interoperability" will become a major emphasis starting on January 1, 2011. The listings of the 200 vendor products that have met either the 2006, 2007, 2008, or 2011 certification include:

NO	Company	Product	Date Certified	Certification Expires	Certification
1	ABEL Medical Software Inc	ABELMed EHR-EMR/PM 9	1/28/2009	1/28/2011	2011
2	ABEL Medical Software Inc	ABELMed PM - EMR 7.0	10/23/2006	10/23/2009	2006
3	ABEL Medical Software Inc	ABELMed PM-EMR v8	6/17/2008	6/17/2011	2007
4	Abraxas Medical Solutions	Abraxas EMR 1.0.3.0	10/23/2006	10/23/2009	2006
5	Abraxas Medical Solutions	Abraxas EMR 4.1.	4/17/2009	4/17/2011	2008
6	Advanced Data Systems Corporation	MedicsDocAssistant 3.0	1/29/2007	1/29/2010	2006
7	Advanced Data Systems Corporation	MedicsDocAssistant 4.0.1	2/9/2009	2/9/2011	2008
8	Agastha, Inc.	Agastha Enterprise Healthcare Software v 1.2	5/21/2009	5/21/2011	2008
9	Allen Systems Group, Inc. (ASG)	ASG-Medappz iSuite v4.0	3/20/2009	3/20/2011	2008
10	AllMeds, Inc.	AllMeds EMR Version 7	4/30/2007	4/30/2010	2006
11	AllMeds, Inc.	AllMeds EMR Version 8	6/17/2009	6/17/2011	2008
12	AllscriptsMisys, LLC	Allscripts MyWay 2008	2/22/2008	2/22/2011	2007
13	AllscriptsMisys, LLC	Allscripts MyWay 8.2	2/22/2008	2/22/2011	2007
14	AllscriptsMisys, LLC	Allscripts Professional 8.1	1/23/2008	1/23/2011	2007
15	AllscriptsMisys, LLC	Allscripts Professional EHR 8.2	1/8/2009	1/8/2011	2008
16	AllscriptsMisys, LLC	Enterprise 11.1.6	3/26/2009	3/26/2011	2008
17	AllscriptsMisys, LLC	HealthMatics EHR 2007.1	1/23/2008	1/23/2011	2007
18	AllscriptsMisys, LLC	Misys EMR 9.10	2/22/2008	2/22/2011	2007
19	AllscriptsMisys, LLC	TouchWorks Electronic Health Record 11.0	7/18/2006	1/18/2010	2006
20	AllscriptsMisys, LLC	TouchWorks V11.1	4/30/2008	4/30/2011	2007
21	AmazingCharts.com, Inc.	Amazing Charts 5	5/29/2009	5/29/2011	2008
22	American Medical Software	Electronic Patient Charts 20	11/12/2008	11/12/2010	2008
23	Aprima Medical Software, Inc	Aprima 2009 (formerly called iMedica PRM2008) Build 8.1	2/22/2008	2/22/2011	2007
24	Aprima Medical Software, Inc	Aprima 2010 2010	6/4/2009	6/4/2011	2008

NO	Company	Product	Date Certified	Certification Expires	Certification
25	AssistMed, Inc.	EZChart 1.2.0.0	9/30/2008	9/30/2010	2008
26	athenahealth, Inc	athenaClinicals 0.27	4/30/2007	4/30/2010	2006
27	athenahealth, Inc	athenaClinicals 9.15.1	6/2/2009	6/2/2011	2008
28	Axolotl Corporation	Axolotl's Elysium 9	5/19/2009	5/19/2011	2008
29	Benchmark Systems	MD-Navigator Clinical 5.0	12/11/2007	12/11/2010	2007
30	BizMatics Inc	PrognoCIS 1.81	4/30/2007	4/30/2010	2006
31	BMD Services Inc.	E-Paperless Practice V2.01	4/30/2007	4/30/2010	2006
32	Business Computer Applications, Inc	PEARL EMR 6.0	4/30/2007	4/30/2010	2006
33	CareData	The CareData Solution 2.7	2/18/2008	2/18/2011	2007
34	Catalis, Inc	Accelerator Graphical Health Record 4.4	1/29/2007	1/29/2010	2006
35	CentriHealth, Inc.	CentriHealth Individual Health Record (IHR) Release 2009.1.17	7/1/2009	7/1/2011	2008
36	Cerner Corporation	Cerner Millennium PowerChart/PowerWorks EMR 2007	4/24/2008	4/24/2011	2007
37	Cerner Corporation	Cerner Millennium Powerchart/PowerWorks EMR 2007.19	4/22/2009	4/22/2011	2008
38	ChartLogic, Inc.	iAchieve EHR Version 2008	4/30/2007	4/30/2010	2006
39	Clinix Medical Information Services LLC	ClinixMD 7.1	1/29/2007	7/29/2010	2006
40	Community Computer Service, Inc.	MEDENT 17	7/11/2007	7/11/2010	2007
41	Community Computer Service, Inc.	MEDENT 18.1	9/30/2008	9/30/2010	2008
42	Complete Medical Solutions, LLC	MyWinmed EMR 1.2	6/25/2009	6/25/2011	2008
43	Conceptual MindWorks, Inc.	Sevocity 5.2	5/5/2008	5/5/2011	2007
44	Conceptual MindWorks, Inc.	Sevocity Version 08	5/26/2009	5/26/2011	2008
45	Connexin Software Inc,	Office Practicum 8.1	4/10/2009	4/10/2011	2008
46	CPSI (Computer Programs and Systems), Inc.	Medical Practice EMR 14	10/23/2006	10/23/2009	2006
47	Criterions, LLC	Criterions 1.0.0	5/29/2009	5/29/2011	2008
48	CureMD Corporation	CureMD 9.0	4/30/2007	4/30/2010	2006
49	CureMD Corporation	CureMD EHR 10	4/29/2009	4/29/2011	2008
50	digiChart, Inc.	digiChart OBGYN 7.0	3/20/2008	3/20/2011	2007

NO	Company	Product	Date Certified	Certification Expires	Certification
51	Doctations, Inc.	Doctations v1.0106062008	6/24/2008	6/24/2011	2007
52	Document Storage Systems, Inc. (DSS)	vxVistA V1.0	4/30/2007	4/30/2010	2006
53	eCast Corporation	eCast EMR 7.0	9/21/2007	9/21/2010	2007
54	eClinicalWorks	eClinicalWorks 7.6.15	8/10/2007	8/10/2010	2007
55	eClinicalWorks	eClinicalWorks 8.0	9/30/2008	9/30/2010	2008
56	Eclipsys Corporation	Sunrise Ambulatory 4.5C SP5	4/22/2008	4/22/2011	2007
57	Eclipsys Corporation	Sunrise Ambulatory Care 4.5	10/23/2006	10/23/2009	2006
58	Eclipsys Corporation	Sunrise Ambulatory Care 5.0 SP1, Eclipsys Auditing Services 1.0 XA and Eclipsys Security Services 1.0 XA Sunrise Ambulatory Care 5.0 SP1, Eclipsys Auditing Services 1.0 XA and Eclipsys Security Services 1.0 XA	6/27/2008	6/27/2011	2007
59	Eclipsys Practice Solutions	Eclipsys PeakPractice 1093	1/22/2009	1/22/2011	2008
60	Eclipsys Practice Solutions	Eclipsys PeakPractice 2006	10/23/2006	10/23/2009	2006
61	Eclipsys Practice Solutions	MediNotes "e" 5.0	10/23/2006	10/23/2009	2006
62	Eclipsys Practice Solutions	MediNotes "e" 5.2	1/24/2008	1/24/2011	2007
63	EHS, Inc	CareRevolution 5.0i	10/23/2006	10/23/2009	2006
64	EHS, Inc	CareRevolution 5.2a	6/20/2008	6/20/2011	2007
65	Electronic Claims Processing Inc. d/b/a PBF Online	MedcomSoft Record UE (V 4.5)	5/15/2008	5/15/2011	2007
66	e-MDs	e-MDs Solution Series 6.1.2	7/18/2007	7/18/2010	2007
67	e-MDs	e-MDs Solution Series 6.3	2/3/2009	2/3/2011	2008
68	eMedicalFiles, Inc	MDAware 2.2	4/30/2007	4/30/2010	2006
69	Encite, Inc	TouchChart 3.3	1/29/2007	1/29/2010	2006
70	EncounterPRO Healthcare Resources, Inc.	EncounterPRO EHR 5	7/18/2006	1/18/2010	2006
71	Epic Systems Corporation	EpicCare Ambulatory EMR Spring 2007	11/30/2007	11/30/2010	2007
72	Epic Systems Corporation	EpicCare Ambulatory EMR Spring 2008	9/30/2008	9/30/2010	2008
73	Gateway Electronic Medical Management Systems (GEMMS)	GEMMS ONE G1.07	10/28/2008	10/28/2010	2008
74	Gateway Electronic Medical Management Systems (GEMMS)	GEMMS ONE Version 6	1/29/2007	1/29/2010	2006
75	GE Healthcare	Centricity Electronic Medical Record 9.2	6/11/2009	6/11/2011	2008
76	GE Healthcare	Centricity EMR 9.0	6/24/2008	6/24/2011	2007

NO	Company	Product	Date Certified	Certification Expires	Certification
77	GE Healthcare	Centricity Enterprise 6.7	6/24/2008	6/24/2011	2007
78	GE Healthcare	Centricity Practice Solution 9.0	6/24/2008	6/24/2011	2007
79	Glenwood Systems LLC	GlaceEMR 2.0	4/30/2007	4/30/2010	2006
80	Glenwood Systems LLC	GlaceEMR 3.0	5/11/2009	5/11/2011	2008
81	gloStream, Inc.	gloEMR 3.5	4/30/2007	4/30/2010	2006
82	gloStream, Inc.	gloEMR 4.0	6/17/2008	6/17/2011	2007
83	gloStream, Inc.	gloEMR 5.0	4/10/2009	4/10/2011	2008
84	gMed, Inc.	gCare 4.0 Release 6.3	6/17/2008	6/17/2011	2007
85	Greenway Medical Technologies, Inc.	PrimeSuite 2007 R2	6/22/2007	6/22/2010	2007
86	Greenway Medical Technologies, Inc.	PrimeSuite PrimeSuite 2007	10/23/2006	10/23/2009	2006
87	Greenway Medical Technologies, Inc.	PrimeSuite PrimeSuite 2008	9/30/2008	9/30/2010	2008
88	Health Systems Technology, Inc	MedPointe 9	5/7/2009	5/7/2011	2008
89	Healthland, Inc.	Physician Practice Documentation (PPD) 9.0.0	6/13/2008	6/13/2011	2007
90	HealthPort	HealthPort EMR V9.0	5/1/2008	5/1/2011	2007
91	HealthTec Software, Inc	HealthTec Fusion 4.4	1/29/2007	1/29/2010	2006
92	Henry Schein Medical Systems	MicroMD EMR 4.5	1/29/2007	1/29/2010	2006
93	Henry Schein Medical Systems	MicroMD EMR 7.0	12/19/2008	12/19/2010	2008
94	HIT Services Group	Acumen EHR 5	12/11/2007	12/11/2010	2007
95	Indian Health Service	Resource and Patient Management System 2008	6/30/2008	6/30/2011	2007
96	INFINITE SOFTWARE SOLUTIONS INC. [D/B/A: MD-REPORTS]	MD-REPORTS 9i	7/8/2009	7/8/2011	2008
97	Ingenix	Ingenix CareTracker 6.2	6/11/2008	6/11/2011	2007
98	InteGreat Concepts, Inc.	IC-Chart Release 6.0	1/29/2007	1/29/2010	2006
99	InteGreat Concepts, Inc.	InteGreat EHR Release 6.3	6/25/2009	6/25/2011	2008
100	Integritas, Inc.	STIX EHR Release 9.0	6/6/2008	6/6/2011	2007
101	Integritas, Inc.	STIX EHR Release 9.1	4/9/2009	4/9/2011	2008
102	Integrity On Site LLC, dba DocuTAP	DocuTAP EMR and Practice Management Solution 2.8.2	6/6/2008	6/6/2011	2007
103	Intivia, Inc.	InSync 4.1	6/26/2008	6/26/2011	2007
104	Intuitive Medical Software	UroChart EHR 3.0	3/13/2009	3/13/2011	2008

AC Group Updated Report
Digital Medical Office of the Future Survey

NO	Company	Product	Date Certified	Certification Expires	Certification
105	iSALUS Healthcare	OfficeEMR 2008	4/30/2007	4/30/2010	2006
106	iSALUS Healthcare	OfficeEMR 2009	6/15/2009	6/15/2011	2008
107	LSS Data Systems (Lake Superior Software)	Medical and Practice Management (MPM) Suite Client Server 5.54	6/27/2008	6/27/2011	2007
108	LSS Data Systems (Lake Superior Software)	Medical and Practice Management (MPM) Suite Client Server 5.55	6/27/2008	6/27/2011	2007
109	LSS Data Systems (Lake Superior Software)	Medical and Practice Management (MPM) Suite Client Server 5.56	6/27/2008	6/27/2011	2007
110	LSS Data Systems (Lake Superior Software)	Medical and Practice Management (MPM) Suite Client/Server 5.6	5/21/2009	5/21/2011	2008
111	LSS Data Systems (Lake Superior Software)	Medical and Practice Management (MPM) Suite MAGIC Version 5.6	1/29/2007	1/29/2010	2006
112	Marshfield Clinic	CattailsMD 5	1/29/2007	1/29/2010	2006
113	Marshfield Clinic	CattailsMD Version 5.9	6/4/2009	6/4/2011	2008
114	McKesson Provider Technologies	Horizon Ambulatory Care 9.4	7/18/2006	1/18/2010	2006
115	McKesson Provider Technologies	Lytec MD 2009	9/30/2008	9/30/2010	2008
116	McKesson Provider Technologies	Medisoft Clinical 15	9/30/2008	9/30/2010	2008
117	McKesson Provider Technologies	Practice Partner 9.2.1	7/17/2007	7/17/2010	2007
118	McKesson Provider Technologies	Practice Partner 9.2.2	7/17/2007	7/17/2010	2007
119	McKesson Provider Technologies	Practice Partner 9.3	9/30/2008	9/30/2010	2008
120	MDLAND	MDLAND Electronic Health Record and Practice Management Systems 8.0	4/30/2007	4/30/2010	2006
121	MDTablet LLC	MDTABLET 2.6.7	4/30/2007	4/30/2010	2006
122	MDTablet LLC	mdTablet 4.0.0	7/2/2009	7/2/2011	2008
123	Medappz, LLC	iSuite 4.0	3/20/2009	3/20/2011	2008
124	Medappz, LLC	Medappz iSuite 3.5	11/1/2007	11/1/2010	2007
125	MedAZ.net	MEDAZ 60720.001	1/29/2007	1/29/2010	2006
126	MedConnect	MedConnect EHR 1.0	6/30/2009	6/30/2011	2008
127	Medflow, Inc.	Medflow EMR Version 7.1	5/19/2009	5/19/2011	2008
128	Medical Communications Systems, Inc. (MCS)	mMD.Net EHR 9.0.9	7/18/2006	1/18/2010	2006
129	Medical Informatics Engineering	WebChart 4.23	7/18/2006	1/18/2010	2006
130	Medical Messenger	Medical Messenger Astral Jet EMR 3.7.1	4/30/2007	4/30/2010	2006

NO	Company	Product	Date Certified	Certification Expires	Certification
131	Medicat, LLC	Medicat 8.8	1/29/2007	1/29/2010	2006
132	Medicmatics Inc	XUMIX VERSION 1.0	7/18/2009	7/18/2011	2008
133	MedInformatix, Inc.	MedInformatix V 6.0	1/29/2007	1/29/2010	2006
134	MedInformatix, Inc.	MedInformatix V7.0	10/28/2008	10/28/2010	2008
135	MediSYS for Physicians, Inc.	MediSYS EHR 1.0	6/30/2009	6/30/2011	2008
136	Meditab Software, Inc.	Intelligent Medical Software (IMS) 12	5/7/2009	5/7/2011	2008
137	Meditab Software, Inc.	Intelligent Medical Software (IMS) 2007	1/29/2007	1/29/2010	2006
138	MedLink International, Inc	MedLink TotalOffice 3.1	9/30/2008	9/30/2010	2008
139	MedNet System	emr4MD Version 6.0.2	6/22/2009	6/22/2011	2008
140	MedPlexus, Inc.	MedPlexus EHR 9.2.0.0	9/30/2008	9/30/2010	2008
141	MedSym Inc.	HemOncPro 4.2	1/29/2007	1/29/2010	2006
142	meridianEMR	meridianEMR 3.6.1	4/30/2007	4/30/2010	2006
143	MTBC (Medical Transcription Billing Corporation)	MTBC EMR 4.0	5/11/2009	5/11/2011	2008
144	NCG Medical Systems, Inc.	dChart EMR 4.5	1/29/2007	1/29/2010	2006
145	Netsmart Technologies	Avatar PM 2006 Release 02	10/23/2006	10/23/2009	2006
146	NexTech Systems Inc.	NexTech Practice 2010 9.3	6/24/2009	6/24/2011	2008
147	NextGen Healthcare Information Systems, Inc.	NextGen EMR 5.4.29	6/25/2007	6/25/2010	2007
148	NextGen Healthcare Information Systems, Inc.	NextGen EMR 5.5	6/25/2007	6/25/2010	2007
149	NextGen Healthcare Information Systems, Inc.	NextGen EMR 5.5.27	9/30/2008	9/30/2010	2008
150	Nightingale Informatix Corporation	Nightingale On-Demand V8.2	2/22/2008	2/22/2011	2007
151	Noteworthy Medical Systems	NetPractice EHR 6.0	1/17/2008	1/17/2011	2007
152	Noteworthy Medical Systems	NetPractice EHR 7.0	4/2/2009	4/2/2011	2008
153	Noteworthy Medical Systems	NetPracticeEHRweb 7.0	6/16/2009	6/16/2011	2008
154	Noteworthy Medical Systems	Noteworthy EHR 5.4	10/23/2006	10/23/2009	2006
155	Nuesoft Technologies, Inc.	NueMD EHR 5.2	5/5/2008	5/5/2011	2007
156	Nuesoft Technologies, Inc.	Nuevita EHR 5.2	5/5/2008	5/5/2011	2007
157	Ochsner Clinic Foundation	Ochsner Clinical Workstation 1.9.8	6/30/2008	6/30/2011	2007

NO	Company	Product	Date Certified	Certification Expires	Certification
158	OIS	OIS EMR 4.1	4/17/2009	4/17/2011	2008
159	OmniMD	OmniMD EMR 6.0.5	4/30/2007	4/30/2010	2006
160	Partners Healthcare System	Longitudinal Medical Record (LMR) 5.1.1	4/30/2007	4/30/2010	2006
161	Physician Advantage	GenesysMD EHR 2.0	7/27/2007	7/27/2010	2007
162	Point and Click Solutions, Inc.	OpenChart 8.0	4/30/2007	4/30/2010	2006
163	Polaris Management, Inc.	EpiChart 5.2	4/30/2007	4/30/2010	2006
164	PracticeOne	e-Medsys - Electronic Health Record (EHR) 5.2	4/17/2009	4/17/2011	2008
165	PracticeOne	e-Medsys Electronic Health Record 5.0	11/30/2007	11/30/2010	2007
166	Praxis EMR, Inc	Praxis V4.0	7/31/2006	1/31/2010	2006
167	Prime Clinical Systems	Patient Chart Manager 5.3	4/30/2007	4/30/2010	2006
168	Prime Clinical Systems	Patient Chart Manager 5.5	6/24/2009	6/24/2011	2008
169	Pulse Systems	Pulse Patient Relationship Management 3.1.1	1/29/2007	1/29/2010	2006
170	Pulse Systems	Pulse Patient Relationship Management 4.1	9/30/2008	9/30/2010	2008
171	Purkinje	CareSeries EHR 2.0	7/27/2007	7/27/2010	2007
172	Sage	Intergy EHR by Sage V4	1/17/2008	1/17/2011	2007
173	Sage	Sage Intergy EHR v5.5	4/9/2009	4/9/2011	2008
174	San Diego Hospitalist Physician Corp.	Xpert EMR 2.0	5/14/2009	5/14/2011	2008
175	Secure Infosys, LLC	MyEMR 2.0	6/24/2009	6/24/2011	2008
176	Sequel Systems, Inc.	SequelMed EMR V7.50	4/30/2007	4/30/2010	2006
177	Silk Information Systems, Inc.	SILK 4.2	2/6/2009	2/6/2011	2008
178	SOAPware, Inc.	SOAPware 2008 SOAPware 2008	6/12/2008	6/12/2011	2007
179	Spring Medical Systems, Inc.	SpringCharts EHR 9.5	1/29/2007	7/29/2010	2006
180	SSIMED	Emrge 6.0, Release 1.0	1/29/2007	1/29/2010	2006
181	SSIMED	EMRge 7.0 Release 1.0	6/20/2008	6/20/2011	2007
182	STI Computer Services, Inc.	ChartMaker 3.0.5	4/22/2008	4/22/2011	2007
183	STI Computer Services, Inc.	ChartMaker Clinical Version 3.2	3/23/2009	3/23/2011	2008
184	StreamlineMD, LLC	StreamlineMD 9.0.9	7/18/2006	1/18/2010	2006

NO	Company	Product	Date Certified	Certification Expires	Certification
185	SuiteMed	SuiteMed Intelligent Medical Software 12	5/7/2009	5/7/2011	2008
186	Symphony Corporation	Symphony Plus EMRx 1.00	5/21/2009	5/21/2011	2008
187	SynaMed, LLC	SynaMed EMR 5.487	4/30/2007	4/30/2010	2006
188	Total OutSource, Inc.	ezEMRxPrivate 7.00	5/21/2009	5/21/2011	2008
189	TransMed Network, Inc.	TransMed CS 3.0	6/20/2008	6/20/2011	2007
190	UNI/CARE Systems, Inc	Pro-Filer 2007.0.0	4/30/2007	4/30/2010	2006
191	Universal EMR Solutions	Physician's Solution 3.0	4/30/2007	4/30/2010	2006
192	Universal Software Solutions, Inc.	VersaSuite 7.5	1/29/2007	1/29/2010	2006
193	US Department of Defense (DOD)	AHLTA 3.3	4/30/2007	4/30/2010	2006
194	Utech Products, Inc.	Endosoft 3.0.3.5	4/30/2007	4/30/2010	2006
195	VIP Medicine, LLC	SmartClinic 16	9/30/2008	9/30/2010	2008
196	Visionary Medical Systems, Inc.	Visionary Dream EHR 7.1	1/29/2007	7/29/2010	2006
197	Waiting Room Solutions	Waiting Room Solutions Practice Management System 3	4/30/2007	4/30/2010	2006
198	Wellogic and GBA Health Network Systems	Wellogic Consult and GBA MEDfx Release X and MEDfx v3.0	3/26/2008	3/26/2011	2007
199	Workflow.com	Workflow EHR 2.1	4/30/2007	4/30/2010	2006
200	WorldVistA	WorldVistA EHR VOE/ 1.0	4/30/2007	4/30/2010	2006

What's the difference between CCHIT Certified® and ONC-ATCB certification?

CCHIT Certified® EHR certification is an independently developed, rigorous inspection of integrated EHR functionality, interoperability, and security. As part of the process, successful use is verified at live sites and product usability is rated. It is intended to serve providers looking for greater assurance that a product will meet their complex needs. Many CCHIT Certified products are also certified in the ONC-ATCB EHR certification program.

ONC-ATCB certification inspection is limited to the HHS criteria and standards. It is modular so the technology inspected may not meet all of the requirements. Our Certification Facts™ label tells you which of the criteria are met. You are responsible for assuring that your certified EHR technology meets all of the requirements. No site verification or usability testing is done under this program.

ONC Certified Vendors:

Certifying ATCB	Vendor	Product	Product Version#
CCHIT	ABEL Medical Software Inc.	ABELMed EHR - EMR / PM	11
CCHIT	Abraxas Medical Solutions, Inc	Abraxas EMR	4.1.7
Drummond Group Inc.	Addison Health Systems, Inc.	WritePad	8
CCHIT	Advanced Data Systems Corporation	Medics DocAssistant	Version 5.2
Drummond Group Inc.	Agastha, Inc.	Agastha Enterprise Healthcare Software	1.2
Drummond Group Inc.	AllegianceMD Software, Inc.	Veracity	7.214
CCHIT	AllMeds, Inc.	AllMeds EHR	9
Drummond Group Inc.	Allscripts	Allscripts Enterprise E HR	11.2
Drummond Group Inc.	Allscripts	Allscripts MyWay EHR	9
CCHIT	Allscripts	Allscripts PeakPractice	5.5
CCHIT	Allscripts	Allscripts Professional EHR	9.2
Drummond Group Inc.	Altapoint Data Systems, LLC	AltaPoint EHR	11
CCHIT	Altos Solutions, Inc.	OncoEMR	2.6
CCHIT	AmazingCharts.com, Inc.	Amazing Charts	Version 6
CCHIT	American Medical Software	American Medical Software - EMR	22
CCHIT	Aprima Medical Software, Inc	Aprima	2011
CCHIT	athenahealth, Inc	athenaClinicals	10.12
CCHIT	Benchmark Systems	Benchmark Clinical	Version 6.0
CCHIT	BioMedix Vascular Solutions	TRAKnet Practice Management Software	2
CCHIT	BizMatics Inc	PrognoCIS	Version 2.0

ONC Certified Vendors:

Certifying ATCB	Vendor	Product	Product Version#
CCHIT	Cerner Corporation	Millennium Powerchart, Healthe Exchange, IQHealth, Health Sentry, Cerner Health Record and P2 Sentinel	2010.01.07 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Millennium Powerchart, Healthe Exchange, IQHealth, Health Sentry, Cerner Health Record and P2 Sentinel	2010.02.01 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Millennium Powerchart, Healthe Exchange, IQHealth, Health Sentry, Cerner Health Record and P2 Sentinel	2007.19.12 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Millennium PowerWorks, Healthe Exchange, IQHealth, Health Sentry, Cerner Health Record and P2 Sentinel	2007.19.12 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Powerchart, Cerner Healthe, IQHealth, HealthSentry and P2 Sentinel	2010.01.07 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Powerchart, Cerner Healthe, IQHealth, HealthSentry, and P2 Sentinel	2010.02.01 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Powerchart, Cerner Healthe, IQHealth, HealthSentry, Cerner Health Record and P2 Sentinel	2010.01.07 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Powerchart, Cerner Healthe, IQHealth, HealthSentry, Cerner Health Record and P2 Sentinel	2007.19.12 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Powerchart, Cerner Healthe, IQHealth, HealthSentry, Cerner Health Record and P2 Sentinel	2010.02.01 and P2 Sentinel v4.2.1
CCHIT	Cerner Corporation	Powerworks, Cerner Healthe, IQHealth, HealthSentry, and P2 Sentinel	2007.19.12 and P2 Sentinel v4.2.1
Drummond Group Inc.	ChartLogic, Inc.	ChartLogic EMR	7
InfoGard	ClearHealth Inc.	ClearHealth	3.1.5
Drummond Group Inc.	ClearPractice	ClearPractice	3
Drummond Group Inc.	CodoniX	CodoniXnotes	2
CCHIT	Community Computer Service, Inc.	MEDENT	19.5

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ONC Certified Vendors:

Certifying ATCB	Vendor	Product	Product Version#
InfoGard	Complete Medical Solutions, LLC	MyWinmed EHR	2.1
CCHIT	Compulink	Advantage/EHR	10
CCHIT	CPSI (Computer Programs and Systems), Inc.	CPSI Medical Practice EMR	V 17
Drummond Group Inc.	Criterions LLC	Criterions EHR Meaningful Use	2
Drummond Group Inc.	Crystal Practice Management	Crystal Practice Management	3
CCHIT	CureMD Corporation	CureMD EHR	Version 10
CCHIT	Cyfluent, Inc.	Cyfluent Chart	2
Drummond Group Inc.	Data Strategies, Inc.	MDsuite	6
Drummond Group Inc.	Defran Systems, Inc.	Evolv-CS	8.4
InfoGard	Dexter Solutions Inc.	eZDocsTM EMR	V2.0
CCHIT	digiChart, Inc.	digiChart OBGYN	8
Drummond Group Inc.	DigiDMS	DigiDMS	11
Drummond Group Inc.	DigiDMS, Inc.	ClinicSpectrum CS	11
CCHIT	DigiDMS, Inc.	ClinicSpectrum Enterprise	10.8
InfoGard	Digital Medical Solutions Inc.	Office Medicine	12
CCHIT	DocPatientNetwork	Doctations	2
InfoGard	Doctor Office Management, Inc.	2011 PhysicianXpress	1
Drummond Group Inc.	Doc-tor.com, LLC	Picasso	3
InfoGard	E*HealthLine.com, Inc.	Phoenix© Integrated Electronic Health Records	Version 9.0
CCHIT	eClinicalWorks LLC	eClinicalWorks	8.0.48
CCHIT	eClinicalWorks LLC	eClinicalWorks	9
CCHIT	eHealth Made EASY, LLC	eHealth Made EASY	3
CCHIT	E-Health Partners, Inc.	EHRez	3.5

ONC Certified Vendors:

Certifying ATCB	Vendor	Product	Product Version#
Drummond Group Inc.	Emdeon Inc.	Emdeon Clinician	7.4
Drummond Group Inc.	e-MDs, Inc.	e-MDs Solution Series	7
Drummond Group Inc.	empowersystems	empowersystems (ambulatory)	1.1.57
Drummond Group Inc.	Enable Healthcare, Inc. (EHI)	Mdnet	3
Drummond Group Inc.	Encite, Inc.	Encite EHR	4.35
CCHIT	Epic Systems Corporation	EpicCare Ambulatory - Core EMR	Spring 2008
CCHIT	Epic Systems Corporation	EpicCare Ambulatory - Core EMR	Summer 2009
CCHIT	Epic Systems Corporation	EpicCare Ambulatory - Core EMR	2010
Drummond Group Inc.	Exscribe, Inc.	E-Record EMR	5
CCHIT	Eyefinity/OfficeMate	OfficeMate/ExamWRITER	10
CCHIT	GE Healthcare	Centricity Advance	10.1
CCHIT	GE Healthcare	Centricity EMR	9.5
CCHIT	GE Healthcare	Centricity Practice Solution	9.5
Drummond Group Inc.	GEMMS, Inc.	GEMMS ONE	7.5.10
CCHIT	Glenwood Systems LLC	GlaceEMR	4.5
CCHIT	gloStream, Inc.	gloEMR	6
CCHIT	gMed, Inc.	gCardio	4.13.0
CCHIT	gMed, Inc.	gCare	4.13.0
CCHIT	gMed, Inc.	gGastro	4.13.0
CCHIT	gMed, Inc.	gUro	4.13.0
CCHIT	Greenway Medical Technologies, Inc.	PrimeSuite	2011
Drummond Group Inc.	H-DOX	H-DOX EHR	3.1

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Certifying ATCB	Vendor	Product	Product Version#
Drummond Group Inc.	Health Administration Systems, Inc.	MediFile Meaningful Use	5
CCHIT	Health IT Services Group	Acumen EHR	6
Drummond Group Inc.	HealthFusion	MediTouch EHR	3
Drummond Group Inc.	HHT International, Inc.	MDFlow EHR and Patient Care Workflow Management System	3
Drummond Group Inc.	iMedicWare, Inc	iDoc	4.1.5
Drummond Group Inc.	InfoQuest Systems, Inc.	InfoCare	IQ11.1
CCHIT	Ingenix	Ingenix CareTracker	7
InfoGard	Insight Software, LLC	My Vision Express	10
Drummond Group Inc.	Integrated Health Care Solutions	Vehracity	2.1
CCHIT	Integrated Systems Management, Inc.	OmniMD	Version 11.0
CCHIT	Integritas, Inc.	Agility EHR	10
Drummond Group Inc.	Intivia, Inc.	InSync	5.4
CCHIT	Intuitive Medical Software	UroChartEHR	4
CCHIT	IO Practiceware, Inc.	IO Practiceware	7
InfoGard	Iris Medical Services LLC	alloFactor	v3.0
Drummond Group Inc.	Kabot Systems	VistA++ EHR Office Edition	2.0.0.1
CCHIT	KeyMedical Software, Inc.	KeyChart	4.0.0.0
Drummond Group Inc.	KPMD INC.	KPMD Ambulatory	4.2.1
CCHIT	LeonardoMD, Inc.	LeonardoMD Virtuoso	1
Drummond Group Inc.	LSS Data Systems	Medical and Practice Management (MPM) Client Server	5.6.4
Drummond Group Inc.	LSS Data Systems	Medical and Practice Management (MPM) MAGIC	5.64
CCHIT	M2comsys INC dba MSQUARED	T-CAS (Total Clinic Automation Solution)	2.2
CCHIT	MacPractice, Inc.	MacPractice MD	4.1
CCHIT	ManagementPlus	ManagementPlus	5
Drummond Group Inc.	McKesson	Horizon Ambulatory Care	10.3.1
CCHIT	McKesson Provider Technologies	Lytec MD	2011
CCHIT	McKesson Provider Technologies	McKesson Practice Complete	7
CCHIT	McKesson Provider Technologies	Medisoft Clinical	V17
CCHIT	McKesson Provider Technologies	Practice Partner	9.5

ONC Certified Vendors:

Certifying ATCB	Vendor	Product	Product Version#
CCHIT	MCS - Medical Communication Systems, Inc.	iPatientCare	10.8
CCHIT	MDLAND	iClinic Comprehensive EHR	12
CCHIT	MED3000, Inc	InteGreat EHR	6.4
InfoGard	Medaxis Corporation	360EHR	2.12
InfoGard	MedAZ.Net, LLC	MedAZ	110101.001
InfoGard	Medcom Information Systems, Inc.	Welford Chart Notes	5.9.19.2
Drummond Group Inc.	MedConnect, Inc.	MedConnect EHR	1
CCHIT	MedEvolve LLC	MedEvolve EHR	4
Drummond Group Inc.	Medflow	Medflow E HR	7.6
CCHIT	Medical Informatics Engineering	WebChart EHR	Version 5.1
Drummond Group Inc.	Medical Messenger	AstralJet	4
CCHIT	Medical Office Online, Inc.	Medical Office Online	2.2
CCHIT	Medicat, LLC	Medicat 2011	10
Drummond Group Inc.	MedInformatix, Inc	MedInformatix	7.5
Drummond Group Inc.	MediRec, LLC	MDrec	2011
CCHIT	Meditab Software, Inc.	IMS	v. 14.0
CCHIT	MedLink International, Inc	iSuite	4
CCHIT	MedPlus, A Quest Diagnostics Company	Care360 EHR	2010.2
Drummond Group Inc.	Medrium Inc.	Complete Practice Management	MU Stage 1 Final
Drummond Group Inc.	MedXLnce, Inc.	M.O.S.E.S. Cloud Complete EHR	5
InfoGard	Mercury Solutions, LLC	PracticeSuite.com	16.0.0
CCHIT	meridianEMR, Inc.	meridianEMR	v5.0
Drummond Group Inc.	MicroFour, Inc.	PracticeStudio	X11
InfoGard	ModuleMD	ModuleMD WISE™	MU2011
Drummond Group Inc.	NCG Medical Systems, Inc.	Perfect Care EH R Meaningful Use Edition	2010
CCHIT	NeoDeck Software	NeoMed EHR	3
Drummond Group Inc.	Netsmart Technologies, Inc.	Avatar™	2011
CCHIT	NexTech Systems Inc.	NexTech Practice 2011	9.7
CCHIT	nextEMR, LLC	nextEMR, LLC	1.5
CCHIT	NextGen Healthcare	NextGen Ambulatory EHR	5.6 SP1
Drummond	Nexus Clinical LLC	Nexus EHR	10.1

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Certifying ATCB	Vendor	Product	Product Version#
Group Inc.			
CCHIT	Nortec Software Inc	Nortec EHR	7
InfoGard	Noteworthy Medical Systems, Inc.	NetPracticeEHRweb	7.0.2
InfoGard	Noteworthy Medical Systems, Inc.	NetPracticeEHRweb	V7.02.0
CCHIT	Office Ally	EHR 24/7	3.6.0
CCHIT	OIS	OIS EMR	4.1.7
CCHIT	Origin Healthcare Solutions	EMRge	8
InfoGard	Paramount Health Solutions LLC	Spectra Suite	2
Drummond Group Inc.	Patagonia Health	Patagonia Health EMR	3
Drummond Group Inc.	PBO	PBOmd	8.2
Drummond Group Inc.	Penn Medical Informatics Systems, Inc.	EyeDoc EMR	9.7.1.0
Drummond Group Inc.	Phoenix Ortho, LLC	Phoenix Ortho	3.5
InfoGard	PracticeSuite, Inc.	PracticeSuite.com	16.0.0
InfoGard	Prime Clinical Systems, Inc.	Patient Chart Manager	5.5
CCHIT	PriMedx Solutions, LLC	PriMedx EHR	10.8
CCHIT	Pulse Systems	2011 Pulse Complete EHR	2011
Drummond Group Inc.	QRS Inc.	PARADIGM	8.3
Drummond Group Inc.	Rabbit Healthcare Systems	Rabbit EHR	5
Drummond Group Inc.	RelayHealth, a division of McKesson Corporation	RelayClinical Platform	10.3
Drummond Group Inc.	RelayHealth, a division of McKesson Corporation	RelayClinical™ EHR	10.3
Drummond Group Inc.	Sage	Sage Intergy Meaningful Use Edition	6.2
CCHIT	Sammy Systems	SammyEHR	5.1.1
Drummond Group Inc.	Secure Infosys LLC	MYEMR	2.4
Drummond Group Inc.	Sequel Systems, Inc.	Sequelmed EMR	8
CCHIT	Sindhu Synergy, LTD	SynergyEHR	1.1
CCHIT	SOAPware, Inc.	SOAPware	2011
CCHIT	STI Computer Services, Inc.	ChartMaker Medical Suite	3.7
CCHIT	StreamlineMD, LLC	StreamlineMD	10.8
CCHIT	SuccessEHS	SuccessEHS	6
CCHIT	SuiteMed	Intelligent Medical Software (IMS)	V14
CCHIT	SynaMed, LLC	SynaMed, LLC	Version 5.4
Drummond Group Inc.	TechSoft, Inc.	MDRhythm	6

ONC Certified Vendors:

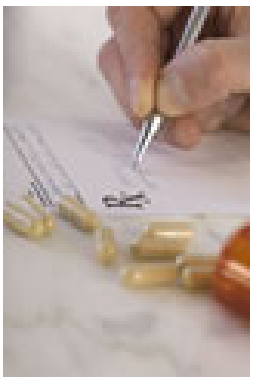
Certifying ATCB	Vendor	Product	Product Version#
Drummond Group Inc.	TRANSMED NETWORK INC.	TRANSMED CS	4
CCHIT	Tu Record Corp	TuRecord	Version 2.3
CCHIT	Universal EMR Solutions	Physician's Solution	5
InfoGard	VIP Medicine, LLC	SmartClinic	17
CCHIT	Waiting Room Solutions	2011 Waiting Room Solutions Web Based EHR and Practice Management System	4
Drummond Group Inc.	WEBeDoctor, Inc.	WEBeDoctor	5.7
Drummond Group Inc.	Workflow.com, LLC	workflowEHR	2.5
Drummond Group Inc.	Yak Digital Corp.	eSoftMD-EHR	5.1

15. *Maintaining Qualification under the Stark and AKA Exemption Rules*

The Certification Commission believes that the Stark and AKA exemption requirement for products to be certified within 12 months prior to donation was intended to ensure that donated products are up-to-date in supporting the latest interoperability standards. The Commission has also noted, however, that practical issues may make it difficult for vendors to maintain continuous compliance throughout a product life cycle. One such issue is CCHIT's change in its certification cycle: while 2008 certification became available on July 1 of that year, 2008 certification ended on June 30, 2009, making it impossible for some vendors to obtain a new certification within the 12 month window.

To provide a practical solution to these issues, the Certification Commission has updated and clarified its policies regarding product certification dates for purposes of the Stark and AKA exemptions. Vendors and Hospitals offering a subsidized EHR should take note of the following:

- The date certification is first *awarded* to a product, after successful completion of all inspections, sets the initial *certification date* for purposes of the Stark/AKA 12-month requirement.
- When a vendor notifies the Commission that a minor update has been made and simply attests that the product remains compliant with the original criteria, the new version number will be added to the Commission's listing, but the *certification date* for the product for Stark/AKA purposes remains unchanged.
- When a vendor notifies the Commission that a significant change has occurred, and the new version is *submitted for retesting and recertification*, a new *certification date* for the product will be set at the time such recertification is awarded.
- When a vendor applies for recertification of a product or certification of a new product, the Commission will automatically update the *certification date* of the vendor's previous product version in order to maintain its Stark/AKA qualification status for up to 90 days during the time when the application and inspection of the updated version/new product is in process.



Conclusion:

Start by determining what type of product you need today and will need in the future (3-5 years out). Do not buy just for today, since many of the products are not designed for future needs that will occur when physicians are reimbursed based on P4P, clinical outcomes and disease management. Once you are down to the top 5 to 8 vendors, ask each vendor to provide you with an estimated cost based on your organization. Ask them to provide you with an estimated three-year total cost of ownership. Once you receive the cost data, you will probably see a cost variation of 2 to 4 time the costs depending on the selected vendors.

Once you have vendor pricing, you can then spend time with the top vendors determining which vendor best meets you specific needs. If you spend time looking at vendors before understanding the specific vendor's pricing methodology, you may find that you cannot afford a vendor's solution, thus wasting your time and the vendor's time.

16. ARRA, HITECT and Meaningful Use.

On February 17, 2009, President Obama signed into law the American Recovery & Reinvestment Act (ARRA) designed to stimulate the lagging U.S. economy. For the healthcare sector, ARRA included a health IT component labeled the "HITECH Act". The 267 pages outlines a plan for spending around $29.2 billion dollars to encourage healthcare organizations to adopt and effectively utilize Electronic Health Records (EHR) and establish health information exchange networks at a regional level, all while ensuring that the systems deployed protect and safeguard the critical patient data at the core of the system. $29 Billion Stimulus Breakdown:

- **$2B** for HIT infrastructure, especially HIE
- **$17.2B** Medicare/Medicaid incentives to doctors and hospitals for "meaningful" use of *certified* HIT (net after government projected savings)
- **$4.7B** for the National Telecommunications and Information Administration's Broadband Technology Opportunities Program
- **$2.5B** for the U.S. Department of Agriculture's Distance Learning, Telemedicine, and Broadband Program
- **$1.1B** for comparative effectiveness grants from AHRQ, NIH, and HHS- does automation improve care
- **$1.5B** for the community health centers through the Health Resources and Services Administration;
- **$500M** for the Social Security Administration;
- **$85M** for the Indian Health Service; and
- **$50M** for the Veterans Benefits Administration
- Assorted "pockets" of HIT funding in state and community funding allotments.

$29.6B IN TOTAL (not counting local funding)

Note: There is actually another $20B for Medicare Incentives before government calculations for savings. The real total for Health IT is about $50 B.)

Successful U.S. healthcare reform and access to electronic health records (EHRs) for Americans by 2014 will require tremendous public/private innovation and the ability to deploy enabling healthcare technologies alongside an intelligent and well-prepared workforce. The American Recovery and Reinvestment Act of 2009 offers an opportunity to spur on essential technology infrastructure and job growth to improve healthcare quality while reducing costs and enabling more patient-centered care models

The opportunity presented by the Bill is enormous, but is there any real stimulus in the stimulus plan? Before we talk about the details of the HITECT Act, readers should understand that stimulus funding does not start until 2011 and only if the healthcare organization can prove "meaningful use" and "interoperatability" with other care providers in the local region. The majority of the funds are not for the purchase of technology, but rather, for the proven utilization of technology based on reporting capabilities. The Congressional Budget Office predicts 90% of physicians and 70% of hospitals will be using a comprehensive, robust Electronic Health Record by 2014. According to their predictions, the country will save billions of dollars on the provision of healthcare, and citizens will receive coordinated, informed care from their entire network of providers.

Hospital EMR Adoption Model

Stage	Functionality	2007	2008
Stage 7	Full e-chart, Creation of CCD record, Data warehousing, outcomes reporting	0.0%	0.3%
Stage 6	Physician Documentation using templates, CDSS (variance and compliance, full PACS	0.3%	0.5%
Stage 5	Closed Loop Medication	1.9%	2.5%
Stage 4	CPOE, CDSS with Clinicals protocols	2.2%	2.5%
Stage 3	Clinical Documentation, Flow sheets, CDSS error checking	25.1%	35.7%
Stage 2	CDR, Controlled Clinical Vocabulary, CDS, DIM	37.2%	31.4%
Stage 1	Lab, Radiology and Pharmacy Installed	14.0%	11.5%
Stage 0	Lab, Radiology and Pharmacy not Installed	19.3%	15.6%

The real question: will a physician spend upwards to $45K over the next 2 years in hopes that they will receive funding over a 5 year period starting in 2011. The answer is still unknown, but every Physician and every HBMA member must understand the requirements and processes to meet the government's goal of every patient having access to their medical records by 2014.

Is EHR adoption slowed because of cost?

Many intellectuals and government officials have been convinced that technology cost is the major factor for slow adoption of EHR technology. As we read in the August 2008 article for the New England Journal of Medicine, only 4% of physicians are fully utilizing EHRs in their practice today with an additional 13% using parts of an EHR records. In the hospital setting, the Healthcare Information Management Systems Society (HIMSS) estimates that less than 2% of hospitals are using an EMR based on the seven levels of hospital technology adoption. In reality, cost is a factor, but maybe a minor factor.

With over 400 vendors in the marketplace, physicians have numerous opportunities to adoption EHR applications that cost less than $1,000 per year. This equates to less than 0.00033% of a physicians annual gross income. We believe the real barrier to adoption has been two-fold:

- Physician data entry time increases by 7X over the paper based system, and
- Physicians are not paid for data entry time.

Therefore, if we cannot decrease the physician's data entry time, then EHR adoption will never take off. But wait – that's where the HITECT Act saves the day. The HITECT Act requires data sharing and interoperatability between all care providers, thus potentially reducing physician data entry time by up to 75%. Finally, someone in the government figured out that the value of the EHR is in the data sharing between the primary care physician and the specialist and between the specialist and the hospital and even more important, between the patient and their care providers. So what's in the Stimulus bill?

Details of the $19 billion set aside in the HITECT ACT

There are two portions of the HITECH Act – one providing $2 billion immediately to the Department of Health & Human Services (HHS) and its sub-agency, the Office of the National Coordinator for Health IT (ONC), and directs creation of standards and policy committees; a second that sets aside $17.2 billion that will eventually be paid to healthcare physicians and hospitals who can demonstrate their use of Electronic Health Records.

$2 billion to HHS / ONC

The Secretary of HHS is directed to spend $300 million of the $2 billion fund to establish more health information exchange (HIE) initiatives in regions and towns across the country, as well as helping existing HIEs to progress in connecting providers. Additionally, there's $20 million allocated to ensure that standards are consistent across products and care settings. Local community HIEs are extremely important, since without a community HIE for patient clinical data exchange, physicians will not qualify for any of the $17.2B in EHR funding. Beyond basic guidelines, the Bill does not assign specific dollar amounts to specific programs. The incoming Secretary is supposed to announce how the remaining funds will be allocated by May 2009. However, since the appointment of the incoming Secretary is delayed, the May 2009 deadline may not be reached. Areas called out for investment include:

- clarifying and further developing standards related to interoperability and privacy;
- building infrastructure for the advances of telemedicine;
- expanding health IT in public health departments;
- establishing a Health IT Research Center and regional Health IT Extension Centers to provide information to healthcare providers on best practices, vendor selection, implementation, training, etc; and

- providing funding through Federal grants via AHRQ, HRSA, CMS and the CDC, as well as grants to states and state-designees to be passed on to healthcare organizations needing assistance with upfront funding for EHRs

$17.2 billion in incentive payments to physicians and hospitals

When the bill was first announced, many organizations were excited to hear that the government was going to help fund EHR adoption. At first glance, most healthcare providers believed they were going to receive funding to purchase an EHR – they were wrong. Physicians who have already adopted EHRs where excited that they were going to receive funding to help reimburse them for their EHR – they were wrong. Funding is going to providers who meet "meaningful use" criteria, can report quality indicators to the government, and most important, can exchange patient specific clinical data with other providers in the community. Funding will not go to providers that have pre-existing EHRs unless they are connecting to a community HIE. One of the government's primary goals is to eliminate the silos of patient information within an individual provider organization.

Therefore, the vast majority of the funds within the HITECH Act are assigned to payments that will reward physicians and hospitals for effectively using a robust, ***connected*** EHR system. There is a program designed for those that see large volumes of Medicaid patients, and another for those that accept Medicare, and in order to qualify for the incentive payments, both physicians and hospitals have to prove three things:

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

Additionally, because the government wants to spur quick movement in this area, all of the incentives include payments for up to five years but provide the largest payments early in the program, and those that don't adopt will eventually be penalized through lower payments. The incentive payments begin in 2011 to ensure the providers have time to adopt and learn to use the EHR; penalties begin in 2015.

Specifics of the Physician Opportunity

As stated, there are two incentive programs for physicians: Medicare and Medicaid. Physicians will choose program participation.

Medicaid Incentives:

- Available only to non-hospital based clinicians, including dentists, certified nurse midwives, and physician assistants practicing in rural health clinics or FQHCs
- Medicaid incentives range up to $65K over a five-year period
- Minimum for Medicaid participation: 30% of a clinician's patients must use Medicaid, with the exception of pediatricians, who only need to have 20% of their patients using Medicaid
- Startup incentive up to $25,000 in state loan funds will be available in year one toward the purchase a certified EHR
- After receiving startup funds, providers who can prove "meaningful use" can receive up to $10,000 annually for an additional four years
- No penalties have been defined by Medicaid for lack of adoption

Medicaid Incentives Schedule								
2011	***2012***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***Total***
$25K	$10K	$10K	$10K	$10K				**$65K**
	$25K	$10K	$10K	$10K	$10K			**$65K**
		$25K	$10K	$10K	$10K	$10K		**$65K**
			$25K	$10K	$10K	$10K	$10K	**$65K**
				$25K	$10K	$10K	$10K	**$55K**
					$25K	$10K	$10K	**$45K**

M**edicare Incentives:**

- Incentives will start in 2011
- Available to all non-hospital physicians who see Medicare patients
- Eligible physicians can receive up to $44K over a five-year period
- Minimum for Medicare participation: Providers must bill 125% of the total incentive received over the five-year period of incentive distribution
- Must prove "meaningful use" of an EHR
- Physicians who have not adopted an EHR by January 1, 2015 will be penalized by reduced Medicare payments

Medicare Incentives Schedule

Year	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*Total*
1-4	$18K	$12K	$8K	$4K	$2K		**$44K**
1-4		$18K	$12K	$8K	$4K	$2K	**$44K**
1-4			$15K	$12K	$8K	$4K	**$39K**
2-4				$12K	$8K	$4K	**$24K**
No Pay							**$0**
No Pay							**$0**

- Physicians who deliver care entirely in a hospital environment, such as radiologists, anesthesiologists, pathologists and ED physicians, are ineligible.

Fee reductions: Providers who do not demonstrate meaningful use in 2014 will see, in their 2015 fee schedules from Medicare, a decrease of 1%. An additional decrease will be affected in 2016 and 2017 down to a total of 97% of the regular fee schedule; it can further be reduced to 95% if the Secretary determines that total adoption is below 75% in 2018.

	No EHR 2015	No EHR 2016	No EHR 2017	No EHR 2018	No EHR
2015	1% penalty	1% penalty	1% penalty	1% penalty	1% penalty
2016	$0K	2%	2%	2%	2%
2017	$0K	$0K	3%	3%	3%
2018	$0K	$0K	$0K	3-4%*	3-4%*
2019+	$0K	$0K	$0K	$0K	3-5%*
TOTAL	**$0K**	**$0K**	**$0K**	**$0K**	**$0**

*Medicare penalties—a decrease in payments for all Medicare professional services—potentially increases starting in 2018 if the HHS Secretary finds the portion of certified/meaningful use EHR users is less than 75%; not to exceed a 5% penalty.

Specifics of the Hospital Opportunity

As with physicians, there are two programs for hospitals: Medicare and Medicaid.

Medicaid: For hospitals seeing more than 10% of their patients with Medicaid, payments will be determined by the same calculation as the Medicare payment algorithm, though payments will be fully weighted for the first four payment years, rather than follow the descending weights in use for Medicare incentive payments, and will be based on Medicaid patient mix. **Medicare:** Hospitals stand to make up to $11 million from incentive payments through a calculation that considers a $2 million base payment, a payment of $200 for each discharge between the 1,150th and the 23,000th discharge annually, and the hospital's total number of inpatient bed days and total charges. Note that Critical Care Hospitals are not eligible for the incentives described above; instead, they will be allowed to expense the acquisition cost of health IT in a single year up to $1.5 million.

Fee Reductions: Eligible hospitals not demonstrating meaningful EHR use by 2015 will see that their fee schedules are not increased as planned but instead will be adjusted increasingly to the disadvantage of the hospital. This reduction only applies to the individual fiscal year; if the hospital begins demonstrating use of an EHR the following year, their fee schedule increase will normalize.

Standards and Certification

Qualified EHR technology means that the EHR is certified to meet standards and includes patient demographic and clinical health information, such as medical history and problem lists, and has the capacity to provide decision support for physician order entry, to capture and query healthcare quality information, and to exchange electronic health information with other sources.

The Secretary of HHS is required by the Bill to review all existing standards, determine the initial set of standards that will affect the Meaningful Use criteria related to certified products, and implementation specifications. All of this must be completed by the HIT Policy Committee and HIT Standards

Privacy Expansion

As part of the HITECH Act, Federal privacy and security laws (HIPAA) were expanded to protect patient health information, including:

- Defining which actions constitute a breach (including some inadvertent disclosures)
- Imposing restrictions on certain disclosures, sales, and marketing of protected health information
- Requiring an accounting of disclosures to a patient upon request
- Authorizing increased civil monetary penalties for HIPAA violations
- Granting authority to state attorneys general to enforce HIPAA

Medical Transcription as a Faster Bridge to EHR Adoption

The EHR promises to lower costs resulting from inefficiency and inappropriate and/or redundant care while improving the coordination of care and exchange of information among healthcare enterprises. However, despite these promises and efforts to date, adoption rates among physicians still remain relatively low, with costs cited as the major deterrent.7 Other adoption concerns include complex organizational and system work flow issues and the increased documentation burdens on the part of physicians when they are pressed to see more patients. Several studies have shown that practice productivity can decrease by at least 10% for several months following EHR implementation. In some non-oncology studies, the average drop in revenue from that loss of productivity was approximately $7,500 per physician8.

While the healthcare industry slowly migrates to broader acceptance and adoption of EHR technologies, the capture, collection, and documentation of health information continues to evolve as well. In fact, electronic document management tools are available now without having to implement a full EHR system. Electronic document systems have the capability today to eliminate patient charts and improve productivity and efficiency without the multi-year timeframe or high cost of a comprehensive EHR system. Using readily-available technology to create a simplified approach to going paperless has been key to success9.

Physicians have long embraced the dictation-transcription process for documenting care encounters. Approximately 600 million clinical documents are produced in the United States each year. Dictated and transcribed documents make up nearly 60% of all clinical data. These documents contain the majority of physician-attested information and are used as the primary source of information for reimbursement and proof of

7 "Electronic Health Records in Ambulatory Care — A National Survey of Physicians." New England Journal of Medicine, July 3, 2008.

8 Oncology Outlook: The Costs and Benefits of Health IT in Cancer Care, Jivesh Sharma, MD, August 21, 2008.

9 Going Paperless Without EHR?, EMR Advice, February 2, 2007.

service. It has historically been and continues to be the documentation method of choice for physicians because it facilitates complex, specific narrative that ensures accurate capture of patient history as well as the care encounter. In addition, it corresponds intuitively to the physician's usual method of working, it is flexible, data is presented in a predictable order, and it requires the same or less time than other current reporting methods. This tremendous source of clinical information is grossly underutilized in current computer-based record systems.

Implementation of template-based data capture systems will further streamline the process and create greater efficiency in documentation for some patient encounters. However, the documentation of most encounters will not be readily facilitated by template solutions. To force complex data into a restricted template could greatly compromise both the scope and quality of the patient encounter record and has the potential for greater fraud and abuse in the system. Voice recognition products are other useful tools for the documentation cycle, especially as a back-end solution paired with a documentation specialist who monitors the quality and placement of the information.

These technologies will continue to require interoperability as the healthcare system moves toward electronic exchange of health information. They will need to provide and support protocols that will continue to work in conjunction with the virtual medical documentation industry given that a large percentage of healthcare facilities (whether acute-care, ambulatory care, or private practice) long ago transitioned their documentation services off-site, using either an at-home workforce or an outsourced service provider. Most EMR systems do not currently have a way to export voice dictation that is embedded into the EMR software. This greatly limits the outsourcing ability of the practice and restricts transcription or voice-recognition editing to an on-site scenario only. Therefore the clinical documentation sector must worker in closer collaboration with EHR/EMR vendors to improve integration of clinical documentation functions as EHR platforms roll out for adoption.

Quality and Security Standardization Leads to Greater Document Compliance and Improved EHR Adoption

Consistent, complete, and accurate documentation are critical to patient safety and coordination of care and should be facilitated by standards in the areas of nomenclature and formatting. As in all other areas of healthcare delivery, standards in healthcare documentation, along with privacy and security standards, at the point of creation must be developed and implemented to promote clarity and patient safety. As the industry transitions toward electronic health records, incorporation of these standards into EMR nomenclature will be crucial to establishing these same safe documentation practices in an electronic environment.

The Health Story Project10, an industry alliance initiated by the medical transcription sector and the American Health Information Management Association (AHIMA), formed to develop and promote information standards that support the flow of information between narrative documents and electronic health records. This rapid-development project bridges the gap between narrative documents produced through dictation and the structured, computable records necessary to feed the EHR. Transcription documents can be imported directly into the EHR and aggregated along with EHR summaries such as the Continuity of Care Document (CCD) in document registries and document management systems for exchange, reporting, and longitudinal analysis. Over the past two years, the Health Story Project developed four technical implementation guides as draft standards for trial use using HL7's Clinical Document Architecture (CDA). These report types include the Consultation Note, History & Physical, Operative Note, and Diagnostic Imaging Reports.

Standardization and adoption of these electronic documents will unlock the valuable data from narrative documents and will facilitate the unrestricted flow of this narrative-source data into the electronic health record as well as expedite the development of interoperable clinical document registries for use within healthcare enterprises and regional/national networks. This project will complete the framework required to integrate these notes into interoperable, accessible, and ultimately computable electronic records. The Health Story Project has an essential role to play in the development of an effective system of electronic health records and health information management. There remain important document types to be defined as well as work to support their implementation. In addition, the healthcare industry must be informed about the availability of these standard document types and about the essential role and benefits of electronic documents.

The Health Information Technology for Economic and Clinical Health Act (HITECH Act) has more stringent privacy and security provisions. Under the proposed law, business associates would be required to implement policies that establish administrative safeguards (such as security policies and training), physical safeguards

10 The Health Story Project, www.healthstory.com

(such as locks and building security systems), and technical safeguards (such as computer encryption, log-in IDs, and auto-log off). Business associates will additionally be subject to direct penalties for violations of the security provisions. The bill also expands federal security breach law to mirror protections that many states have passed in recent years. The bill requires the notification of patients of any unauthorized access, acquisition, or disclosure of their "Unsecured PHI" that compromises not only the patient's privacy and security, but also the integrity of the information. Considering the impact of these changes on medical transcription service organizations (MTSOs) currently operating as business associates, the clinical documentation sector will work toward establishment of uniform security encryption standards for the exchange of protected health information between MTSOs and the provider community. In addition, the sector will move toward mandatory certification of documentation specialists handling PHI to validate their full understanding of privacy and security policies.

Meaningful Use Requirements

The federal HIT Policy Committee has approved revised recommendations of a workgroup for an initial definition of "meaningful use" of electronic health records systems. Among the changes made in the recommendations are refinements in computerized physician order entry criteria and a shorter timeline for implementing personal health records.

The definition is important because providers must demonstrate meaningful use of EHRs to qualify for Medicare and Medicaid incentive payments starting in 2011 under the economic stimulus law. The recommendations now go to the Office of the National Coordinator for Health Information Technology and other units of the Department of Health and Human Services. HHS officials will use the recommendations for guidance as they develop rules to implement the incentive programs. A proposed rule is expected by the end of this year.

The policy committee's Workgroup on Meaningful Use recommends that 2011 criteria apply not just to 2011, but also to a provider organization's first adoption year. That means if a provider cannot be ready for incentive payments until 2012 or 2013, the organization still will start with 2011 criteria. In other words, 2011 criteria would be considered Adoption Year 1 criteria.

Consequently, 2013 criteria would be in effect in 2013 or in an organization's third adoption year.

The workgroup's adopted definition of meaningful use is a matrix of more than two dozen requirements that have been revised to some degree since it first was unveiled a month ago. The workgroup made several clarifications, particularly in the area of requirements for adoption of CPOE. But many of the details remain to be fleshed out during the administrative rules process.

For instance, the requirement to use CPOE for "all" orders in 2011 means that 10% of orders of any type must be

entered by the authorizing provider. This threshold would accommodate pilot CPOE projects and implementations in progress. But the requirement lacks clarity on how to meet the criteria. For instance, does "10% of all orders of any type" mean that 10% of each type of order must be electronically entered, or 10% of total orders? If the 10% criteria covers all orders, an organization might be able to meet the criteria by electronically ordering all medications, or all supplies, with all other orders remaining paper-based.

Other revisions to the 2011 criteria include:

- Implement one clinical decision support rule relevant to a specialty or a high clinical priority;
- Submit claims electronically to payers;
- Check insurance eligibility electronically when possible;
- Provide patients with timely electronic access to their health information;
- Provide patients, upon request, with an electronic copy of their discharge instructions and procedures at the time of discharge;
- Require the capability to exchange health information where possible in 2011, with participation in a national health information exchange by 2015.

The revised recommendations also call for giving all patients access to personal health records populated in real-time in 2013, two years earlier than previously proposed. The policy committee's workgroup also clarified payment of incentives when an organization is being investigated for violations of the HIPAA privacy or security rules. The revised recommendations call for the Centers for Medicare and Medicaid Services to withhold incentive payments until confirmed violations are resolved.

The complete recommendations soon will be available at http://healthit.hhs.gov. Click on Public-Private Initiatives, then Health IT Policy Committee. The workgroup's initial recommendations include 25 objectives--most covering inpatient and outpatient care--for EHRs in 2011. These include, among others:

MEANINGFUL USE CRITERIA – PHYSICIANS

The first list is of the 25 Stage 1 Meaningful Use criteria for *eligible providers* (EP) and comes from the proposed rule: "Medicare and Medicaid Programs; Electronic Health Record Incentive Program."

The full 556-page document can be viewed and/or downloaded at:
http://www.federalregister.gov/OFRUpload/OFRData/2009-31217_PI.pdf

(1) **OBJECTIVE:** Use CPOE
MEASURE: CPOE is used for at least 80 percent of all orders.

(2) **OBJECTIVE:** Implement drug-drug, drug-allergy, drug- formulary checks
MEASURE: The EP has enabled this functionality

(3) **OBJECTIVE:** Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT®
MEASURE: At least 80 percent of all unique patients seen by the EP have at least one entry or an indication of none recorded as structured data.

(4) **OBJECTIVE:** Generate and transmit permissible prescriptions electronically (eRx).
MEASURE: At least 75 percent of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology.

(5) **OBJECTIVE:** Maintain active medication list.
MEASURE: At least 80 percent of all unique patients seen by the EP have at least one entry (or an indication of "none" if the patient is not currently prescribed any medication) recorded as structured data.

(6) **OBJECTIVE:** Maintain active medication allergy list.
MEASURE: At least 80 percent of all unique patients seen by the EP have at least one entry (or an indication of "none" if the patient has no medication allergies) recorded as structured data.

(7) **OBJECTIVE:** Record demographics.
MEASURE: At least 80 percent of all unique patients seen by the EP or admitted to the eligible hospital have demographics recorded as structured data.

(8) **OBJECTIVE:** Record and chart changes in vital signs.
MEASURE: For at least 80 percent of all unique patients age 2 and over seen by the EP, record blood pressure and BMI; additionally, plot growth chart for children age 2 to 20.

(9) **OBJECTIVE:** Record smoking status for patients 13 years old or older
MEASURE: At least 80 percent of all unique patients 13 years old or older seen by the EP "smoking status" recorded.

(10) **OBJECTIVE:** Incorporate clinical lab-test results into EHR as structured data.
MEASURE: At least 50 percent of all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital during the EHR reporting period whose results are in either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.

(11) **OBJECTIVE:** Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, and outreach.
MEASURE: Generate at least one report listing patients of the EP with a specific condition.

(12) **OBJECTIVE:** Report ambulatory quality measures to CMS or the States.
MEASURE: For 2011, an EP would provide the aggregate numerator and denominator through attestation as discussed in section II.A.3 of this proposed rule. For 2012, an EP would electronically submit the measures are discussed in section II.A.3. of this proposed rule.

(13) **OBJECTIVE:** Send reminders to patients per patient preference for preventive/ follow-up care.
MEASURE: Reminder sent to at least 50 percent of all unique patients seen by the EP that are 50 and over.

(14) **OBJECTIVE:** Implement five clinical decision support rules relevant to specialty or high clinical priority, including for diagnostic test ordering, along with the ability to track compliance with those rules.
MEASURE: Implement five clinical decision support rules relevant to the clinical quality metrics the EP is responsible for as described further in section II.A.3.

(15) **OBJECTIVE:** Check insurance eligibility electronically from public and private payers.
MEASURE: Insurance eligibility checked electronically for at least 80 percent of all unique patients seen by the EP.

(16) **OBJECTIVE:** Submit claims electronically to public and private payers.
MEASURE: At least 80 percent of all claims filed electronically by the EP.

(17) **OBJECTIVE:** Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, and allergies) upon request.
MEASURE: At least 80 percent of all patients who request an electronic copy of their health information are provided it within 48 hours.

(18) **OBJECTIVE:** Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, allergies).
MEASURE: At least 10 percent of all unique patients seen by the EP are provided timely electronic access to their health information.

(19) **OBJECTIVE:** Provide clinical summaries to patients for each office visit.
MEASURE: Clinical summaries provided to patients for at least 80 percent of all office visits.

(20) **OBJECTIVE:** Capability to exchange key clinical information (for example, problem list, medication list, allergies, and diagnostic test results), among providers of care and patient authorized entities electronically.
MEASURE: Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.

(21) **OBJECTIVE:** Perform medication reconciliation at relevant encounters and each transition of care.
MEASURE: Perform medication reconciliation for at least 80 percent of relevant encounters and transitions of care.

(22) **OBJECTIVE:** Provide summary care record for each transition of care and referral.
MEASURE: Provide summary of care record for at least 80 percent of transitions of care and referrals.

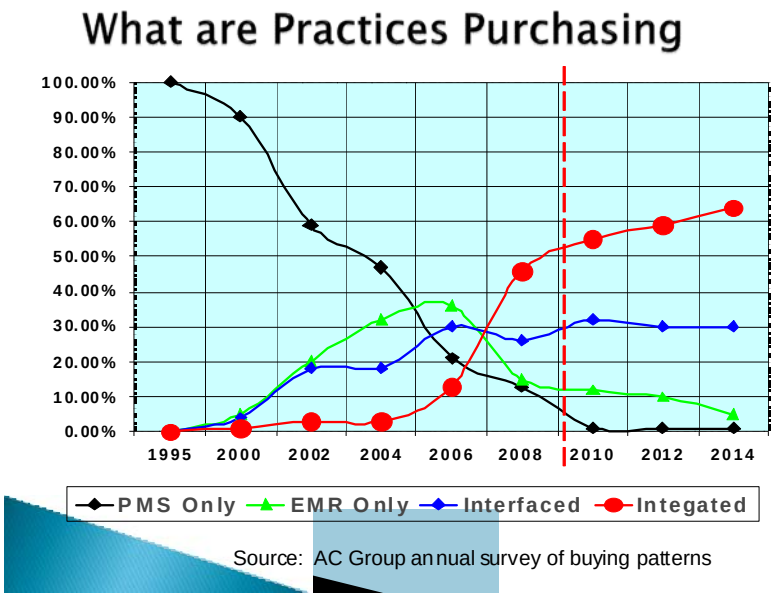
(23) **OBJECTIVE:** Capability to submit electronic data to immunization registries and actual submission where required and accepted.
MEASURE: Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries.

(24) **OBJECTIVE:** Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.
MEASURE: Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies (unless none of the public health agencies to which an EP or eligible hospital submits such information have the capacity to receive the information electronically).

(25) **OBJECTIVE:** Protect electronic health information maintained using certified EHR technology through the implementation of appropriate technical capabilities.
MEASURE: Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308 (a)(1) and implement security updates as necessary.

Spending Trends:

Spending on technology by physicians has tripled since the 1990's and is expected to triple again in the next four years. The majority of the increase will incur in the upper three levels of IT Maturity (Physician interaction). We believe that the average physician will be spending upwards to $10,000 for an EHR, $3,000 for other related technology applications, and an average of $4,000 for installation, training, and configuration. Once you add hardware, networks, and mobile devices, the average physician will be spending more than $25,000 on technology. For those practices that are looking for a combined EHR and PMS, the average price will exceed $30,000. However, in an ASP model, the average physician can



obtain a complete Digital Medical Office of the Future for around $800.00 per month.

Until 2006, the majority of new technology sales were for internet applications and EHR applications. However, in 2006 we saw a major change in the belief that a practice's current practice management system would indeed meet the practice's future needs. In 2003, less than 9% of practices were looking to replace their older PMS application. In 2006 the ratio increased to 29%. By 2008 the ratio had increased to 83%. Additionally, 60% of the healthcare EHR vendors have reported major increases in combined EHR and PMS sales in 2009, a 87% increase over 2006. For our clients, we have experience a major change in physician preference in technology. In 2004, only 12% of our clients where interested in a combined PMS and EHR application. In 2009, the ratio increased to over 92%.

So what created the change in physician preference? A study of 4,243 physician showed that 62% of physicians were interested in investing in a comprehensive EHR within the next 24 months – although many barrier to adoption where indicated. Of that 62% of the physicians, 84% indicated that they wanted to replace their current PMS for the following reasons:

- 74% indicated that they believed the product no longer met their needs
- 83% wanted to have a combined PMS/EHR from the same vendor to reduce the risk of ineffective interfaces.
- 81% wanted to have a fully integrated PMS/EHR with one combined database to insure maximum efficiency.
- 24% indicated that their current PMS product was no longer being supported by any vendor.

However, the question is always, "who" will be purchasing. Once again, AC Group has developed their 2010 annual market segmentation table on future spending for EHR's based on the nine market segments. Given the number of practices, and the current EHR penetration rates that vary from 8.5% to 45.9%, the number of potential sales of new EHR installations is estimated at around 138,000 practices which represents almost 600,000 active physicians. Another factor that affects new sales is the number of practices that are replacing older EHR applications that are either no longer supported by the vendor or no longer meet the ever increasing needs of the practice. Based on our research, more than 600 practices replaced older EHR applications with new EHR applications. Therefore, even though sales increased in 2009, the actual EHR adoption rate did not increase at the same rate of new sales.

	Market Segment	2009 % of Practices	2009 Estimated EMR Penetration	2009 Installed EHR Physicians	2009 Installed EHR Practices
A	1 to 2 Physicians	63.5%	8.50%	10,413	8,330
B	2 to 5 Physicians	27.6%	11.50%	16,133	4,889
C	6 - 9 Physicians	4.8%	12.40%	6,946	926
D	10 to 49 Physicians	2.5%	15.25%	16,985	585
E	50 to 99 Physicians	0.8%	18.48%	16,980	228
F	100 to 249 Physicians	0.5%	29.00%	29,180	204
G	Large Practices & Teaching Organizations	0.3%	45.85%	58,478	240
	Total	100.0%	19.0%	155,115	15,402

Once we understand the market size by segment, we can start estimating the potential revenues for EHR applications over the next 6 years. We estimate that the healthcare industry could spend up to $5.0 on EHR applications in the 6 years plus an additional $3.0B on hardware related products and almost $2.7B on implementation and training. Since software products require support and maintenance, we estimate spending on support for new applications over the next 6 years could be as high as $2.36B. Therefore overall new spending for EHR related products, services, and hardware could exceed $10.6B from 2010 through 2015. Once we add in support and services fees for previously installed EHR application, total spending on EHR related activities could exceed $20B over the next 6 years.

	Market Segment	Estimated EMR Software Revenues 2010 - 15	Estimated EMR Hardware/Network Revenues 2010-15	Estimated EMR Implementation and Training Revenues 2010-15
A	1 to 2 Physicians	$ 1,200,922,367	$ 571,735,920	$ 618,296,664
B	2 to 5 Physicians	$ 1,209,299,332	$ 633,296,435	$ 622,609,557
C	6 - 9 Physicians	$ 391,059,390	$ 225,272,736	$ 201,337,508
D	10 to 49 Physicians	$ 607,865,695	$ 385,182,222	$ 312,960,556
E	50 to 99 Physicians	$ 499,675,256	$ 343,862,542	$ 279,388,315
F	100 to 249 Physicians	$ 529,523,959	$ 364,403,585	$ 296,077,912
G	Large Practices & Teaching Organizations	$ 614,289,140	$ 422,736,613	$ 343,473,498
	Total	$ 5,052,635,139	$ 2,946,490,052	$ 2,674,144,010

	Market Segment	Estimated EMR Support Revenues 2010-15	Total New Sales Market 2010 - 2015	Support Revenue for installs prior to 2010 for 2010 - 15
A	1 to 2 Physicians	$ 562,031,668	$ 2,390,954,951	$ 839,857,673
B	2 to 5 Physicians	$ 565,952,088	$ 2,465,205,324	$ 1,182,990,649
C	6 - 9 Physicians	$ 183,015,795	$ 817,669,634	$ 463,031,692
D	10 to 49 Physicians	$ 284,481,145	$ 1,306,008,473	$ 1,029,297,015
E	50 to 99 Physicians	$ 233,848,020	$ 1,122,926,113	$ 947,493,107
F	100 to 249 Physicians	$ 247,817,213	$ 1,190,005,456	$ 1,628,239,151
G	250+ Physicians	$ 287,487,318	$ 1,380,499,251	$ 3,263,062,557
	Total	$ 2,364,633,245	$ 10,673,269,201	$ 9,353,971,843

	Market Segment	Total New Sales plus Annual Support 2010 - 15	Estimated EHR Consulting Revenues 2010-15
A	1 to 2 Physicians	$ 3,230,812,623	$ 64,616,252
B	3 to 5 Physicians	$ 3,648,195,973	$ 58,371,136
C	6 - 9 Physicians	$ 1,280,701,326	$ 21,771,923
D	10 to 49 Physicians	$ 2,335,305,487	$ 39,700,193
E	50 to 99 Physicians	$ 2,070,419,219	$ 37,267,546
F	100 to 249 Physicians	$ 2,818,244,607	$ 50,728,403
G	Large Practices & Teaching Organizations	$ 4,643,561,808	$ 69,653,427
	Total	$ 20,027,241,044	$ 342,108,880

Along with capital purchases, practices are usually required to pay between 13% to 22% of the software costs each year for product upgrades and product support. Therefore over a six year period, the average practice pays for the entire system again and again. However, without support, the practice has a 73% chance of technology problems. These problems can create operational and clinical issues, which could bankrupt the practice if the corrections are not made within a timely manner. For most established EHR vendors, support fees represent between 35% to 65% of their annual revenues. For Practice Management vendors, support fees represent between 52% to 90% of their annual revenues.

The majority of the expenditures will be in the large Practices and Teaching Organizations followed by practices with 1 to 5 physicians followed by the 10 - 99 physician groups and the large clinics with over 100 physicians. However, this still leaves almost $2.0B being spent by small practices with < 5 physicians. When we add annual support costs, upgrades, and other annual expenditures, the overall market opportunity is closer to $200.0 B over the next 6 years.

The final cost number is for consultants. Consulting firms like AC Group provide a great operational and financial value to physician practices. Basically, with over 400 EHR choices in the healthcare EHR marketplace, physicians need outside independent analysis on which vendor is the best for their practice. If you believe all of

the EHR vendor hype, every product is the best and every vendor is outselling their competition. In fact based on our 2009 vendor survey, the top 100 EHR vendors claim that, in total, the top 100 have sold and effective installed over 500,000 providers on EHRs. Given these marketing claims, you wonder how the industry can claim a 61% adoption rate when physicians state that the adoption rate is only 19% and according to the New England Journal of Medicine August 2008 report, only 4% of providers are using an EHR for complete documentation and the remaining 13% only use portions of the EHR.

What this tells us is that after 30 years of EHR adoption; only 4% of physicians have seen the "value" of using an EHR for complete documentation. Therefore, it might be impossible for the nation to achieve the goal of 80% physician adoption by 2015. In reality, based on the adoption rates over the past 30 years, we might not reach 20% adoption and full use of EHRs by 2015. The bottom-line, the industry must find a way of showing "EHR value" instead of just trying to sell a "tool". We believe that an EHR is just a tool and to insure adoption, we must help providers understand that clinical and operational transformation (COT) is a prerequisite for a successful EHR implementation.

The low adoption figure further concealed a significant discrepancy between users in large institutions and multi-specialty clinics and those in small office practice. According to one study, by the summer of 2009, 46% of all university and staff-model (Kaiser, Mayo, etc) physicians were expected to be using an EHR compared to less than 9% of community-based physicians in group smaller than 5 providers. [(11)]

Another study was conducted by AC Group during the summer of 2008 and updated in 2009. The survey asked physicians a basic operational question:"one year after purchasing your EHR were you using the EHR for on-line clinical review and documentation, placing orders and reviewing results, E & M coding, and are you generating an electronic note on 80% of your patients". We assumed that more than 60% of physicians that have purchased and installed EHRs would answer: "Yes – one year after purchasing our EHR we are seeing 80% of our patients electronically". In fact, we were shocked to discover that 73% of physicians indicated that: "NO – they were NOT able to use the EHR for charting on 80% of their patient charts".

However, our financial numbers assume that physician EHR adoption will increase from an average of 19.0% to over 75% by 2015. This is a big assumption since it appears that the adoption rate is increasing by only 12% per year. Therefore, if the current trend continues, the total adoption rate will only be around 37% by 2015. So what will it take to increase EHR adoption?

11 2008 Presentation of EMR usage, TEPR and MGMA conferences by Mark R. Anderson

To help with the perceived EHR cost issues, President Obama's push for and in February of 2009, the industry received a "shot in the arm". Under the ARRA stimulus and HITECH Act, physicians can receive between $44,000 to $69,000 in financial incentives if that purchase and effective use EHR technology. An evaluation of ten EHR vendor's pricing methodologies determined that expected five year costs averages $45,265, therefore, the government is fully funding EHR adoption if physicians meet four requirements:

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

As of October 14, 2009, over 200 products have been certified by an organization that has been endorsed by the federal government (CCHIT). However, no EHR vendor has been certified on the new 2011-12 ARRA certification requirements. Therefore should physicians wait until certification (starting in January 2010) before purchasing an EHR or are physicians willing to take the word of the vendors that they will meet the certification requirements? The answer is not clear. Based on our internal evaluations of 120 EHR vendors, we believe that less than 40 vendors will actually meet the 2011-12 requirements, meaning that almost 90% of the EHR vendors will not meet the new requirements for HITECT funding by 2011. With time, we estimate that up to 60 vendors could meet the HITECT requirements by 2013. The challenge, the actual requirements are not expected to be fully defined until December 2009.

As we mentioned, the industry MUST change, before the adoption rate can exceed 50%. With new Pay-for-Performance (P4P) programs, government incentives, malpractice incentives, and new requirements for clinical reporting, physicians will need to convert to newer technology to stay in business.

18. AC Group's March 2011 PM and EHR Product and Company Evaluation

AC Group, Inc. (AC Group) has released their 16th report on **Practice Management System (PMS), Electronic Medical Record (EMR)** and **Electronic Health Record (EHR).** This year's report provides physicians, MSOs, IPAs, and PHOs with one of the most comprehensive evaluations to date of leading PMS/EMR/EHR applications. According to the author, Mark Anderson, Healthcare IT Futurist, "Physicians and organizations such as DOQ-IT, state QIOs and IPAs are looking for a 3rd party independent evaluation of the various EMR/EHR offerings in the marketplace today. The current pressures in the industry for increased efficiency and better care delivery, coupled with significant advances in technology and applications, have enabled EMRs to take center stage. The challenge with EMRs is that it is very difficult for the average physician practice to effectively evaluate its options.

The survey is an extensive evaluation of functional criteria that can serve as a valuable tool for the vendor selection process. The entire report is over 300 pages long and covers all 6 levels of technology for the physician's office.

Summary Results: To ensure that the application met the real needs of physicians, a detailed study was conducted by AC Group, Inc., during the Spring of 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, and 2011 with updates October of 2003, 2004, 2005, 2006, 2007, 2008, 2009, and 2010. The AC Group technology report is based on 90 months of research and the cumulative results of a 90-page questionnaire distributed to each participating vendor. The EHR survey includes 3,200 functional questions divided into 43 categories, while the PMS survey includes over 1,000 functionality questions divided into 26 categories.

The 43 functional categories included a section on the Institute of Medicine's (IOM) requirements for a computerized patient record (CPR), along with functional questions relating to operational areas including prescriptions, charge capture, dictation, interface with laboratories, physician order entry, decision support and alerts, security, personal health records, reporting and documentation. To assist the physician community, the AC Group report quantifies six specific components necessary to ensure that a physician or a group of physicians have made the right choice. The components include:

1. **Product Functionality** – How well a product meets the basic requirements of a comprehensive EHR based on the guidelines of the Institute of Medicine and the detailed comprehensive survey of functionality based on AC Group's 2,300+ EHR functionality survey.

2. **End-User Satisfaction** – How well a company performs in relation to "End-User Satisfaction" surveys conducted by independent analyst firms such as AAFP (www.aafp.org/centerforhit.xml), KLAS (http://www.healthcomputing.com/) and AC Group, Inc. (http://www.acgroup.org)

3. **Company Financial Viability** – The strength of a company in relationship to their annual revenues, profitability, and percentage of revenues that are placed back into future development.

4. **Client Base** – The strength of the company's EHR client base and their ability to understand and meet the needs of their current and future clients.

5. **Technology** – The strength of the EHR's use of proven technology that enables a practice to become a digital office of the future.

6. **Price** – The total price of the solution should be considered when making a decision – not just the price of the software. Practices should determine the "Total Cost of Ownership" (TCO) when evaluating the numerous potential solutions.

7. **Implementation Approach**: From our studies of failed and successful installations, we have determined that the methodology used for product installation, configuration, and staff training affects the practice's ability to achieve clinical and operational transformation. The AC Group selection methodology provides physicians with a simple methodology that they can use to help reduce the number of choices. According to our research, the number of vendors that state that they sell an ambulatory EHR is currently over 385 – too many for any one physician to consider. Through the use of this methodology, practices can reduce the number of potential choices to the top 5 to 10 EHR/PMS products – based on their specific requirements.

Continuing in 2011, AC Group will be "Validating" vendor application. The purpose of the detailed analysis is to determine which vendors meet the functionality to be considered a "Validated EHR" today and to determine which vendors who, with future development, could have a "Validated EHR" in the next couple of years. Vendor Products that receive a minimum rating of 85% are routinely reviewed for validation by AC Group. Other vendors have excellent charting systems and document imaging systems, but in many cases, do not have the necessary clinical alerts, clinical knowledge based databases, and may not have the Clinical Decision Support (CDS) necessary to improve care and to document improvements in clinical outcomes. They still provide excellent benefits, but should NOT be considered a clinically driven EHR. The EMR/EHR evaluation includes a weighted point value for each of the 2,300 questions, based on the following criteria:

- The current product **doesn't** offer this functionality
- The current product **provides** the functionality for an **additional cost**
- The current product **provides** the functionality from **a third party**
- A future product enhancement in the **next three months** will provide the functionality
- A future product enhancement in the **next six months** will provide the functionality
- A future product enhancement in the **next year** will provide the functionality
- The product **provides** the functionality currently

Functionality Requirements:

What EMR/EHR functionality is required for a practice? The requirements today are far less than what will be required in the near term. New state, regional, and national regulations are being considered. New minimum standards are being discussed at the national level. Health plans will begin implementing required clinical health status reporting within the next few years. As seen in Southern California and in the Hudson Valley of New York, health plans are beginning to provide financial incentives to those practices that can track and report clinical outcomes for a specific population. Finally, malpractice carriers are beginning to provide discounts for those providers with a Validated EMR application – or in other words – physicians that do not use EMRs will pay higher for the malpractice rates, starting in 2011/12. Therefore, the functional requirements today should be the functionally requirements of the future. A practice cannot afford to purchase a system today that will not meet the functionality requirements of the future. A study conducted by AC Group on 126 practices that replaced their EMR in the past three years showed that the average cost to the practice (new system costs, retraining, lost productivity, etc) costs the average physician over $50,000. Therefore when making an EMR/EHR decision, make the right choice – make a choice for the future. From AC Group interviews, the majority of the physicians are requesting the following specific functionality:

- Automated E&M Coding based on clinical documentation
- Tracking of Vital Signs with minimum and maximum values
- Best Practice guidelines with Clinical Decision Support, based on national guidelines
- Family Practice, Orthopedic, and Pediatric based clinical knowledge bases
- e-Rx, with alerts and formulary compliance by patient's specific health plan
- Integration with lab orders and results
- Integration with radiology orders, reports and the any new Picture Achieving Communication (PAC) System or viewing of digital films.
- Physician Dashboards for summary information for each physician, customized to each physician's unique needs
- Patient Summary screens that summarize patient's clinical condition, including e-Rx, allergies, procedures, hospitalizations, chief complaints, prior visits, allergies, family history, social history, etc.
- Educational materials in multi languages, that is, automatically customized to the patient's specific clinical and social needs
- Auto interface to hospital and ambulatory dictations
- Web-Based Personal Health Records (PHRs), so that family can review selected materials that physicians elect to provide electronically
- Health maintenance recording and tracking for outcomes measurement
- Integration with document imaging and workflow management
- Clinical messaging between physicians and the staff
- Clinical messaging between the physicians and the patient's families for selected activities
- Recording and tracking of telephone messages
- Electronic Rx refills
- Order tracking and alerting if a test result has not been completed within a specific period of time
- Template-driven clinical charting, to ensure that chart clinical information is complete and interoperable between specialists
- Access anywhere, at anytime, on any device

Five important caveats to keep in mind as you review the results:

1. Literally hundreds of products are identified as EMRs, and while a good faith effort was made to contact as many vendors as possible, many chose not to respond.
2. The survey findings are self-reported, that is, they are based on what *vendors* said about their *own* products.
3. Fourteen vendors were required to participate in face-to-face demonstrations of their product's functionality in order to receive "validation". The validation process tested more than 200 scenarios. A number of the vendors have not been tested as of this report and therefore have an (*) next to their company name.
4. A few of the highly visible EMR vendors elected NOT to participate in the survey. Many of these vendors are not willing to document their functionality in writing, while others state that either they do not participate in surveys or they were too busy to participate.
5. Starting in May of 2005, AC Group added a "confidence factor" which indicates AC Group's confidence in the vendor's reported rakings. A vendor with a 5-Star confidence level indicates that their product has been tested and we believe that more than 90% of their answers are validated. A vendor with a 3-Star confidence level indicates that the product has been tested at least once and we are confident that over 70% of the responses are validated. A vendor with a 1-Star confidence level indicates that AC Group has NOT been able to evaluate the vendor's claims as of this report.

The vendors that participated in this year's evaluation or had participated in one of AC Group's prior evaluations include:

- AcerMed Inc
- AllMeds, Inc.
- Allscripts - HealthMatics
- Allscripts – Touchworks
- Allscripts – Professional
- Allscripts - Enterprise
- Alteer
- Amazing Charts, Inc
- Amicore
- Bizmatics Inc
- Bond Technologies, LLC
- Business Computer Applications
- Businet, LLC
- Cerner
- Chartcare, Inc.
- Chartlogic
- Cliniflow (Monarch)
- Clinisolutions Inc.
- Companion Technologies Corporation
- CureMD
- Cyber Records
- Daw Systems, Inc.
- DigiChart
- DocSite
- Dr. I-Net Corporation
- Dr. Notes
- eCast Corporation
- eClinicalWorks
- Eclipsys Peak Practice
- EHS
- Emdeon Practice Services
- e-MDS
- eMedicalFiles, Inc
- Epic Systems Corporation
- GE Healthcare
- GEMMS
- gMed
- Greenway Medical Technologies
- Hamilton Assoc
- Health Communication Systems
- Health Highway
- Health Probe
- HealthPort
- Henry Schiem

- Holt Systems Inc.
- iMedica, Inc.
- INFOR*MED
- InteGreat Concepts, Inc. (InteGreat)
- Intelligent Medical Systems, Inc.
- JMJ Technologies
- LighthouseMD
- LSS Data Systems
- McKesson Corporation
- McKesson Practice Partner
- MCS-Medical Communication Systems, Inc.
- MDanywhere Technologies Inc.
- MDTablet
- MEDCOM Information Systems, Inc.
- MedcomSoft.
- Medical Information Systems, Inc.
- Medical Manager software
- Medical Office Online, Inc.
- Medi-EMR
- Medinformatix, Inc
- MediNotes Corporation – Clinician
- MediNotes Corporation "e"
- Meditab Software, Inc.
- MediWeb
- Mednet System
- Medstar
- MeridianEMR, Inc.
- MIE Web
- Misys Healthcare Systems
- mMD.Net
- Monarch Medical International
- Mountain Medical Technologies, Inc.
- NextGen Healthcare Information Systems, Inc.
- Nightingale
- Noteworthy Medical Systems
- OD Professional
- OmniMD (A Division of Integrated Systems Inc.)
- Orion Systems International Inc
- Quest EMR
- Physician Micro Systems, Inc. (PMSI)
- Practice Partner
- PracticeIT
- PracticeXpert
- PRAXIS EMR by Infor-Med, Inc.
- PracticeOne LLC
- ProPractia, Inc.
- Pulse Systems, Inc.
- QuickMed, Inc.
- Sage Software Healthcare, Inc
- Scribe Healthcare Technologies
- Smart Doctor
- Spring Medical
- SSI Med
- StreamlineMD
- Stryker Imaging
- SuiteMed LLC
- SynaMed, LLC
- Task Technologies
- VersaForm Systems Corp
- Visionary Medical
- Vista Care
- Vitalworks
- Wellogic

Additionally, with the discussion around Regional Healthcare Information Organizations (RHIOs) and Health Information Exchanges (HIEs), AC Group added an additional ranking for the top Health Information Exchange (HIE) products. The companies participating included:

- AxSys
- Healthvision Corporation
- Axolotl
- Kryptiq Corporation
- Med Net Systems
- Wellogic
- NextGen
- Misys Vision
- dbMotion
- Medplus (FirstGate)
- eClinicalworks eHX
- Orion Healthcare
- Noteworthy Medical
- CureMD
- NextGen CHS

AC Group 2011 Functionality Process

In March 2011, AC Group divided our findings into multiple categories, including, Integrated Community EHRs, Multi-Specialty Large clinic EHRs, EHRs for medical practices, EMRs for medical practices, Charting Systems, Document Imaging Management (DIM) Systems, and Integrated Medical Office Systems (Practice Management System, EMR, and DIM).

With the trend towards national standards and Pay-for-Performance guidelines, the March 2011 functionality rating included a point value system and a revised survey to enable smaller EHR vendors to participate. The new format based on 43 functional and operational categories and combined numerous functionality questions into category rating. We find a direct correlation between the results of our prior studies and our new survey format. Also in 2011, we place more emphasis on Meaningful use, DOQ-IT measures, PQRI measures, Disease Management, Specialty EMR content, Medical Device Interfaces, Evidence-based reference content, Practice / Community Portal Capabilities, Clinical Decision Support, Knowledge Couplers, Health Maintenance Alerts, and Registry Functions. We found that our eRX, Lab interfaces, CPOE, and foundation criteria functionality categories did not need to be revised since we were already receiving adequate vendor comparisons.

The 2011 report represents the ranking of vendor capability, based on the vendor's responses to the questions, the vendor's willingness to place every answer into a binding contract, and the proprietary weighting system that has been developed over the past 6 years. Since 2005, more than 114 vendors submitted responses to the new survey, 16 vendors did not update their responses since October of 2006, 12 vendors did not update their responses since May of 2006 and 10 vendors are either out of business or have elected not to participate in the surveys any more.

Disclaimer:

Although AC Group receives a small % of their revenues from vendors for speaking, white papers, or market analysis, AC Group does NOT perform any activities and does NOT receive any funding that promotes one vendor over another, helps a vendor win contracts, or helps a vendor win competitive bids over another vendor. AC Group remains independent from all vendors. Additionally, AC Group does NOT install, train, or customize vendor applications. Our belief is that if you work with certain vendors, there is a perception that you might select one vendor over another. In AC Group's case, there is NO financial or operational value to recommend one vendor over another. AC Group has always been and remains independent from all EHR vendors.

Overall 5 – Star Ratings for PM and EHR Products

When evaluating overall **EHR** functionality, end-user satisfaction, and Company Viability, thirteen vendors received 5-star ratings.

1. Epic Systems Corporation
2. NextGen Healthcare Information System
3. Medical Communication Systems, Inc
4. Greenway Medical Technologies
5. Allscripts Enterprise
6. e-MDs
7. StreamlineMD
8. McKesson Practice Partner
9. eClinicalWorks, LLC
10. Pulse Systems, Inc.
11. GE Healthcare Centricity
12. Meditab Software, Inc.
13. SuiteMed LLC

Additionally, nine additional vendors received 4 star ratings based on October 2009 but are expected to become 5-Star rated product by the end of the year.

1. GEMMS
2. CureMD Corporation
3. Allscripts Professional (formerly HealthMatics Office)
4. gMED
5. MED3OOO, Inc.
6. GE Healthcare Flowcast
7. Sage Software Healthcare, Inc.
8. Aprima Medical Software, Inc
9. Medical Informatics Engineering, Inc.

When evaluating overall **PM and EHR** functionality, company viability, ease of use, and end-user satisfaction, the following vendors received 5-star ratings.

1. Epic Systems Corporation
2. NextGen Healthcare Information Systems
3. Medical Communication Systems, Inc.
4. Allscripts Enterprise
5. Greenway Medical Technologies
6. e-MDs
7. GEMMS *
8. McKesson Practice Partner
9. StreamlineMD
10. eClinicalWorks, LLC
11. Pulse Systems, Inc.
12. GE Healthcare Centricity
13. Meditab Software, Inc.*
14. SuiteMed LLC*

Note: *(*) indicates that the product has not been fully tested by AC Group yet.*

AC Group Updated Report
Digital Medical Office of the Future Survey
Overall 5 – Star Ratings for PM and EHR Products

The following pages describe AC Group's top EHR vendors by product category. To assist healthcare organizations, we have divided our report into the following rating categories:

AC Group Updated Report
Digital Medical Office of the Future Survey
Overall 5 – Star Ratings for PM and EHR Products

The following vendors received the highest overall rating for Company Viability, PMS and EHR Functionality, and Implementation, Training, Support. The same vendors received the highest overall rating for stand-alone EHR products.

Overall Rating (5 = High, 1 = Low)	Epic Systems Corporation	NextGen Healthcare Information Systems	Medical Communication Systems, Inc.	Allscripts Enterprise	Greenway Medical Technologies	e-MDs	GEMMS	McKesson Practice Partner	Streamline MD	eClinical Works
Tested Level (Confidence)	****	*****	*****	*****	*****	****	*****	*****	***	***
Total Overall 5 Star Rating										
Prepared for the ICE Age	4.30	4.68	4.33	3.38	-	-	-	-	-	4.25
Total PM/EMR/PHR plus Company	4.60	4.53	4.50	4.29	4.25	4.28	4.22	4.29	4.31	4.34
Total PM/EHR Plus Company	4.55	4.52	4.43	4.33	4.32	4.29	4.29	4.27	4.26	4.24
Total EMR Plus Company	4.54	4.52	4.44	4.34	4.44	4.28	4.28	4.26	4.27	4.24
eRX Product	5.00	5.00	5.00	4.50	5.00	4.00	5.00	4.00	5.00	4.00
Product Functionality										
EHR	4.95	4.96	4.85	4.16	4.00	4.20	4.59	4.77	4.85	4.82
EMR	4.67	4.80	4.75	4.46	4.64	4.20	4.47	4.46	4.75	4.66
PMS	4.58	4.76	4.82	4.54	4.63	4.50	4.63	4.24	4.82	4.72
PHR	5.00	4.60	5.00	4.00	3.79	4.20	3.79	4.40	4.70	5.00
EMR Light	4.82	5.00	5.00	5.00	5.00	4.00	4.82	5.00	5.00	5.00
Total PM/EHR	4.71	4.85	4.69	4.39	3.80	4.30	4.55	4.52	4.69	4.67
Total PM/EMR	4.66	4.87	4.65	4.54	4.15	4.20	4.56	4.51	4.65	4.58

AC Group Updated Report
Digital Medical Office of the Future Survey
Overall 5 – Star Ratings for PM and EHR Products

Overall Rating (5 = High, 1 = Low)	Epic Systems Corporation	NextGen Healthcare Information Systems	Medical Communication Systems, Inc.	Allscripts Enterprise	Greenway Medical Technologies	e-MDs	GEMMS	McKesson Practice Partner	Streamline MD	eClinical Works
Tested Level (Confidence)	****	*****	*****	****	*****	*****	*****	****	*****	***
Product Delivery										
Installation and Configuration	4.70	4.50	4.50	4.50	4.56	3.20	4.70	4.50	4.50	4.50
Training	4.50	4.60	4.30	4.00	4.50	3.20	4.50	4.60	4.30	4.00
Timing of Implementation	4.10	4.70	4.30	4.10	4.20	4.20	4.10	4.70	4.30	4.10
Customization of Product	4.00	3.95	4.00	4.80	4.50	4.50	4.00	3.95	4.00	4.80
Flexibility	4.00	3.90	4.20	4.90	4.70	4.30	4.00	3.90	4.20	4.90
Total Product Delivery	4.26	4.33	4.26	4.46	4.49	3.88	4.26	4.33	4.26	4.46
Company Stability										
Management	5.00	4.75	4.00	4.90	4.40	4.80	4.40	4.90	4.00	4.50
Company	5.00	4.90	3.50	4.90	4.40	4.70	4.00	4.70	4.00	4.70
Future Revenues	5.00	4.90	4.20	4.90	4.20	4.30	3.80	4.30	4.00	4.90
Future Profitability	5.00	4.90	4.50	4.50	4.20	4.00	3.80	4.00	4.50	4.90
Number of Clients	2.00	5.00	3.00	3.90	4.00	4.80	3.00	4.80	3.50	5.00
Growth Opportunity	5.00	4.90	4.20	4.20	4.25	4.60	4.40	4.00	3.80	4.80
Corporate Vision	5.00	4.80	4.20	5.00	4.50	4.40	4.00	4.00	3.90	4.60
Strong References	5.00	4.40	4.00	5.00	4.90	4.85	4.65	4.10	3.50	4.20
Total Company Rating	4.63	4.82	3.95	4.66	4.36	4.56	4.01	4.35	3.90	4.70

Overall Rating (5 = High, 1 = Low)	Epic Systems Corporation	NextGen Healthcare Information Systems	Medical Communication Systems, Inc.	Allscripts Enterprise	Greenway Medical Technologies	e-MDs	GEMMS	McKesson Practice Partner	Streamline MD	eClinical Works
Tested Level (Confidence)	****	*****	*****	****	*****	*****	*****	****	*****	***
Support and Client Satisfaction										
KLAS Rating - PM (Relative)	4.73	4.47		4.70	4.77			4.19	-	4.14
KLAS Rating - EHR (Relative)	4.58	4.20		4.18	4.76	4.62		4.39	-	4.34
Long-Term Support	4.70	4.30	4.75	4.80	4.80	4.20	4.50	3.90	4.00	4.50
ACG End User	4.80	4.50	4.50	4.10	4.50	4.70	4.20	4.15	4.00	3.00
End User Satisfaction	4.70	4.37	4.63	4.44	4.71	4.51	4.35	4.16	4.00	3.99
Ease of Use/Usability										
PM Ease of Use	4.50	4.30	4.50	4.00	4.40	4.50		4.20	4.10	4.10
EHR Ease of Use	4.35	4.20	4.40	4.20	4.70	4.50	4.60	4.00	4.80	4.40
Easy of Modification	5.00	4.40	4.70	4.00	4.75	3.50	4.60	5.00	4.20	4.80
Easy of Reporting	5.00	4.70	4.70	4.10	4.70	4.00	4.00	4.00	4.40	4.20
Product Pricing/Contracting										
Initial First Year Costs	3.20	3.80	4.50	4.00	3.80	4.55	4.20	4.00	4.60	4.70
Second Year Costs	4.00	3.75	4.50	4.30	3.75	4.00	4.15	4.00	3.90	4.00
Contracting Terms	4.00	4.40	4.00	4.10	3.90	3.50	4.00	3.90	4.00	3.40
Negotiated Contracting Terms	4.40	4.90	4.20	4.10	4.25	4.50	4.10	4.20	4.00	4.60
Performance Guarantees	4.70	4.40	4.15	4.00	4.80	4.00	4.40	3.80	4.00	3.00

AC Group Updated Report
Digital Medical Office of the Future Survey
Overall 5 – Star Ratings for Product Delivery

When considering newer technologies, practices should not only look at a company's financial viability and product functionality, practices should also closely look at the vendor's ability to deliver the software and to insure an effective installation. The following vendors received the highest rating in overall product delivery.

Overall Rating (5 = High, 1 = Low)	Epic Systems Corporation	NextGen Healthcare Information Systems	Allscripts Enterprise	Medical Communication Systems, Inc.	StreamlineMD	McKesson Practice Partner	INFOR*MED	Intuitive Medical Software, LLC.	Axolotl	e-MDs
Tested Level (Confidence)	****	*****	*****	****	*****	**	*****	***	****	****
Product Delivery										
Installation and Configuration	4.50	4.50	4.00	4.70	4.50	4.00	4.50	4.70	4.50	4.00
Training	4.00	3.50	4.30	4.20	4.60	4.50	4.50	4.50	4.30	4.00
Timing of Implementation	4.10	4.50	4.30	4.80	4.70	4.50	4.00	4.10	4.30	4.00
Customization of Product	4.80	4.90	4.80	4.00	3.95	4.50	4.20	4.00	4.00	4.60
Flexibility	4.90	4.90	4.70	4.20	3.90	4.00	4.20	4.00	4.20	4.60
Total Product Delivery	4.46	4.46	4.42	4.38	4.33	4.30	4.28	4.26	4.26	4.24

When considering newer technologies, practices should not only look at product functionality, practices should also closely look at the vendor's company viability. The following vendors received the highest rating in overall company viability.

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	eClinicalWorks, LLC	Allscripts Enterprise	Epic Systems Corporation	e-MDs	GE Healthcare Centricity	Greenway Medical Technologies	McKesson Practice Partner	Allscripts Professional (formerly HealthMatics Office)
Tested Level (Confidence)	*****	****	*****	****	*****	*****	****	***	***
Company Stability									
Management	4.75	4.50	4.90	5.00	4.80	4.80	4.40	4.90	4.30
Company	4.90	4.70	4.90	5.00	4.70	4.85	4.40	4.70	4.90
Future Revenues	4.90	4.90	4.90	5.00	4.30	4.20	4.20	4.30	4.00
Future Profitability	4.90	4.90	4.50	5.00	4.00	4.20	4.20	4.00	4.00
Number of Clients	5.00	5.00	3.90	2.00	4.80	5.00	4.00	4.80	4.50
Growth Opportunity	4.90	4.80	4.20	5.00	4.60	3.50	4.25	4.00	4.00
Corporate Vision	4.80	4.60	5.00	5.00	4.40	4.80	4.50	4.00	4.30
Strong References	4.40	4.20	5.00	5.00	4.85	4.10	4.90	4.10	4.50
Total Company Rating	4.82	4.70	4.66	4.63	4.56	4.43	4.36	4.35	4.31

In Many cases, the best EHR vendor for your practice might not be the vendor with the highest functionality rating, or the company with the highest viability, or the one with the best customer satisfaction. However, the following 16 vendors are selling more or are positioned to sell the most applications in the next three years. Not necessarily because the vendors meet your overall unique requirements, but these vendors are primed to survive the next three years. All of these vendors are well positioned for the upcoming 2011 interoperability requirements and are already positioned for clinical data exchange following the government's CCD national standards. The following two pages highlight these vendors and are sorted alphabetically.

Overall Rating (5 = High, 1 = Low)	Allscripts Enterprise	Allscripts Professional	Cerner Corporation	CureMD Corporation	eClinicalWorks, LLC	Eclipsys Corporation	e-MDs	Epic Systems Corporation
Tested Level (Confidence)	*****	*****	***	*****	*****	***	***	****
Total Overall 5 Star Rating								
Prepared for the ICE Age	3.38	-	-	4.20		-	-	4.30
Total PM/EMR/PHR plus Company	4.28	4.11	3.60	4.49	4.12	3.23	4.01	4.67
Total PM/EHR Plus Company	4.33	4.13	3.84	4.51	3.95	3.68	3.97	4.61
Total EMR Plus Company	4.34	4.12	3.81	4.51	3.94	3.61	3.95	4.60
Product Functionality								
EHR	3.50	3.27	3.56	4.62	4.91	2.39	4.20	4.97
EMR	4.46	3.72	3.72	4.74	4.66	2.84	4.20	4.67
PMS	4.54	3.65	3.99	4.74	4.72	3.04	4.50	4.58
Total PM/EHR	4.39	3.79	3.90	4.71	4.67	3.14	4.30	4.71
Total PM/EMR	4.54	3.83	3.95	4.76	4.58	3.19	4.20	4.66

Overall Rating (5 = High, 1 = Low)	GE Healthcare Centricity	gMED (GI Practices)	Greenway Medical Technologies	McKesson Practice Partner	Medical Communication Systems, Inc.	NextGen Healthcare Information Systems, Inc.	Pulse Systems, Inc.
Tested Level (Confidence)	****	****	****	*****	*****	*****	*****
Total Overall 5 Star Rating							
Prepared for the ICE Age	-	-	-	3.83	4.33	4.68	-
Total PM/EMR/PHR plus Company	4.14	3.87	4.31	4.35	4.50	4.60	4.33
Total PM/EHR Plus Company	4.21	4.21	4.42	4.35	4.43	4.60	4.27
Total EMR Plus Company	4.17	4.18	4.59	4.35	4.44	4.59	4.26
Product Functionality							
EHR	4.41	2.52	4.00	4.46	4.85	4.87	5.00
EMR	4.41	3.38	4.64	4.66	4.75	4.80	4.79
PMS	4.56	3.96	4.63	4.54	4.82	4.76	4.81
Total PM/EHR	4.58	3.53	3.80	4.64	4.69	4.85	4.82
Total PM/EMR	4.55	3.49	4.15	4.67	4.65	4.87	4.77

eRX Vendors – Stand Alone

Electronic prescribing (eRx) holds promise for simplifying the prescription process. Many herald it as the perfect entry into electronic medical records (EMR), by using one of these simple eRx programs for a while, an EMR could be less intimidating. Also since it is typically a less expensive option than a full blown EMR, it offers an incremental investment towards a paperless office.

The benefits of an eRx system are mostly obvious, eliminating illegible prescriptions, enhancing communication between provider, patient, payer, and pharmacy, as well as improving work efficiency. However some are less apparent, by using a more advanced program the provider can avoid some very preventable errors such as drug-drug interactions, drug-allergy reactions, dosing errors and therapeutic duplication. In pediatrics with weight based dosing needed for practically every prescription written this kind of decision support is crucial for reducing errors. Also several programs will provide patient based information that can be given for each medication prescribed. Finally one additional feature that can be added to using eRx is cost information that may not be as readily available to providers in our traditional prescribing methods.

Back in 2000, the healthcare marketplace had more than 30 stand-alone eRX vendors. In 2008, the number of standalone eRX vendors was reduced to 6 named companies. The vendors with the best stand-alone eRX functionality include:

- Allscripts eRx.Now (NEPSI) initiative www.allscripts.com
- DAW Systems (ScriptSure), www.dawsystems.com, www.scriptsure.com,
- Dr First Rcopia (www.drfirst.com)
- iScribe ePresc **(** www.scribe.com)
- PocketScript - http://www.zixcorp.com/solutions/eprescribing.php
- NewCrop - www.newcroprx.com/

Integrated Community Electronic Health Records (ICE)

With the movement to community-based clinical systems, which allow interoperability between multiple clinical charting systems, many vendors are developing systems for communities, Local Healthcare Information Organizations (LHIOs), and Regional Healthcare Information Organizations (RHIOs). These vendors may not have a full functioning EMR, but provide the interoperability functions of an EMR-Light, along with the ability to maintain a community health record via a community clinical and demographic data exchange. Advance functionality includes reporting and tracking of orders, results, e-Rx, allergies, and problem lists, among others. The product should maintain a community master patient index based on numerous inputs, including hospitals, health plans, and numerous physician Practice Management Systems. The Community Health Record vendor must also be working with various EMR/EHR vendors to ensure effective clinical data exchange, following national standards such as CCR or other recognized future interoperability standards. Based on a survey of 1,245 Physicians, EMR-Light applications are preferred 4:1 today, since the product is easier to install and the adoption rate is 80% higher. The advantage of an EMR -Light application is:

- Lower cost of entry (usually 40% of a full EMR application)
- 30-60 day implementation (usually 50% faster)
- Enhanced workflow without major changes in the way the physician practices.
- e-Forms design versus detailed template charting (60% faster than full EMR)
- Operational improvements of 75-80%, instead of EMR 90-95%, but at lower costs, shorter implementation, and less interruption in physician workflow patterns.

Although not marketed as an EMR-Light, many of the EMR vendors could sell their application as an EMR-Light, since an EMR-Light system provides limited clinical notes, e-Prescribing, limited Document Imaging Management, clinical results tracking and messaging, viewing of lab results and dictated reports. This type of system is excellent for those physicians who elect to implement newer technologies in an incremental approach. These systems can help a practice eliminate unnecessary tasks, without changing the way a physician practices. Clinicians can view lab results and dictated reports from any location and can usually implement e-Prescribing, along with medication, chief complaint, allergies, and vital signs tracking.

Finally, with the planned creation of Regional Healthcare Information Organizations (RHIOs), the government is backing those organizations that have the ability to drive clinical adoption within an entire community. The vendor that can provide base-level functionality to an entire community will win, and will have the best opportunity to become the dominate EMR vendor by 2009. To accomplish a community system, vendors must learn how to get multiple physicians from multiple practices to agree to work together to create one-common “Continuity of Care Record” (CCR). How big is the market? By 2009, AC Group estimates that $1.5B will be spent on Community Health Record (CHR) EMR-Light applications.

Integrated Community Electronic Health Records (ICE)

Overall Rating (5 = High, 1 = Low)	AxSys	NextGen Healthcare Information Systems, Inc.	Noteworthy Medical Systems, Inc.	Healthvision Corporation	MediCity	Epic Systems Corporation	Wellogic	Axolotl	eClinicalWorks, LLC
Tested Level (Confidence)	* * * * *	* * * * *	* * * *	* * * *	* *	* * * *	* *	* *	* * * * *
Total Overall 5 Star Rating									
Prepared for the ICE Age	4.90	4.68	4.45	4.38	4.37	4.30	4.28	4.15	4.00
Total PM/EMR/PHR plus Company		4.59	3.84			4.67	3.62		4.30
Total PM/EHR Plus Company		4.59	3.92			4.61	3.83		4.16
Total EMR Plus Company	4.50	4.58	3.89			4.60	3.88	4.45	4.16
eRX Product	4.60	5.00	4.00	-		5.00	5.00	4.00	4.00
Product Functionality									
EHR	4.50	4.87	3.41			4.97	2.61	4.45	4.91
EMR	4.40	4.80	3.62			4.67	3.35	4.30	4.66
PMS		4.76	4.12			4.58	2.74		4.72
PHR	4.90	4.60	3.41			5.00	2.59		5.00
EMR Lite	4.85	5.00	2.78			4.82	3.69	4.00	5.00
Total PM/EHR		4.85	3.77			4.71	3.09		4.67
Total PM/EMR		4.87	3.70			4.66	3.35		4.58

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with more than 100 Providers

Overall Rating (5 = High, 1 = Low)	Epic Systems Corporation	NextGen Healthcare Information Systems, Inc.	Allscripts Enterprise	eClinicalWorks, LLC	GE Healthcare Flowcast	Sage Software Healthcare, Inc.
Tested Level (Confidence)	* * * *	* * * * *	* * * * *	* * * *	* * * * *	* * *
Total Overall 5 Star Rating						
Prepared for the ICE Age	4.30	4.68	3.38	4.25	-	-
Total PM/EMR/PHR plus Company	4.60	4.53	4.29	4.34	3.96	3.99
Total PM/EHR Plus Company	4.55	4.52	4.33	4.24	4.10	4.07
Total EMR Plus Company	4.54	4.52	4.34	4.24	4.07	4.06
eRX Product	5.00	5.00	4.50	4.00	4.00	5.00
Product Functionality						
EHR	4.95	4.96	4.16	4.82	4.00	4.70
EMR	4.67	4.80	4.46	4.66	4.00	4.48
PMS	4.58	4.76	4.54	4.72	4.90	4.67
PHR	5.00	4.60	4.00	5.00	3.00	3.41
EMR Lite	4.82	5.00	5.00	5.00	5.00	5.00
Total PM/EHR	4.71	4.85	4.39	4.67	4.20	4.58
Total PM/EMR	4.66	4.87	4.54	4.58	4.50	4.62

Overall Rating (5 = High, 1 = Low)	Epic Systems Corporation	NextGen Healthcare Information Systems, Inc.	Allscripts Enterprise	eClinicalWorks, LLC	GE Healthcare Flowcast	Sage Software Healthcare, Inc.
Product Delivery						
Installation and Configuration	4.80	4.80	4.70	3.20	4.50	4.00
Training	4.80	4.30	4.37	3.20	4.20	4.20
Timing of Implementation	4.00	4.20	4.50	4.20	3.50	4.20
Customization of Product	4.80	4.95	4.50	4.50	3.50	4.00
Flexibility	4.80	4.95	4.70	4.30	3.50	3.90
Total Product Delivery	4.64	4.64	4.55	3.88	3.84	4.06
Company Stability						
Management	5.00	4.75	4.90	4.50	4.80	4.00
Company	5.00	4.90	4.90	4.70	4.40	4.80
Future Revenues	5.00	4.90	4.90	4.90	4.00	4.10
Future Profitability	5.00	4.90	4.50	4.90	4.00	4.25
Number of Clients	2.00	5.00	3.90	5.00	3.00	4.30
Growth Opportunity	5.00	4.90	4.20	4.80	4.00	4.70
Corporate Vision	5.00	4.80	5.00	4.60	4.00	4.25
Strong References	5.00	4.40	5.00	4.20	4.80	4.00
Total Company Rating	4.63	4.82	4.66	4.70	4.13	4.30

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 25 to 99 Providers

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	Medical Communication Systems	Greenway Medical Technologies	Allscripts Enterprise	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.	GE Healthcare Centricity
Tested Level (Confidence)	* * * * *	* * * * *	* * * * *	* * * *	* * * * *	* * * *	* * * * *	* * *
Total Overall 5 Star Rating								
Prepared for the ICE Age	4.68	4.33	-	3.38	-	4.25	-	3.90
Total PM/EMR/PHR plus Company	4.53	4.50	4.25	4.29	4.29	4.34	4.26	4.23
Total PM/EHR Plus Company	4.52	4.43	4.32	4.33	4.27	4.24	4.21	4.20
Total EMR Plus Company	4.52	4.44	4.44	4.34	4.26	4.24	4.21	4.21
eRX Product	5.00	5.00	5.00	4.50	4.00	4.00	5.00	5.00
Product Functionality								
EHR	4.96	4.85	4.00	4.16	4.77	4.82	4.58	4.65
EMR	4.80	4.75	4.64	4.46	4.46	4.66	4.47	4.55
PMS	4.76	4.82	4.63	4.54	4.24	4.72	4.62	4.57
PHR	4.60	5.00	3.79	4.00	4.40	5.00	4.60	4.40
EMR Lite	5.00	5.00	5.00	5.00	5.00	5.00	4.67	4.67
Total PM/EHR	4.85	4.69	3.80	4.39	4.52	4.67	4.45	4.53
Total PM/EMR	4.87	4.65	4.15	4.54	4.51	4.58	4.34	4.58

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 25 to 99 Providers

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	Medical Communication Systems	Greenway Medical Technologies	Allscripts Enterprise	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.	GE Healthcare Centricity
Product Delivery								
Installation and Configuration	4.80	4.56	4.70	4.70	4.50	3.20	4.00	4.70
Training	4.30	4.50	4.50	4.37	4.00	3.20	4.20	4.20
Timing of Implementation	4.20	4.20	4.10	4.50	4.10	4.20	4.00	3.50
Customization of Product	4.95	4.50	4.00	4.50	4.80	4.50	4.20	3.50
Flexibility	4.95	4.70	4.00	4.70	4.90	4.30	4.00	3.50
Total Product Delivery	4.64	4.49	4.26	4.55	4.46	3.88	4.08	3.88
Company Stability								
Management	4.75	4.00	4.40	4.90	4.90	4.50	4.20	4.80
Company	4.90	3.50	4.40	4.90	4.70	4.70	4.20	4.85
Future Revenues	4.90	4.20	4.20	4.90	4.30	4.90	4.30	4.20
Future Profitability	4.90	4.50	4.20	4.50	4.00	4.90	4.40	4.20
Number of Clients	5.00	3.00	4.00	3.90	4.80	5.00	3.20	5.00
Growth Opportunity	4.90	4.20	4.25	4.20	4.00	4.80	4.20	3.50
Corporate Vision	4.80	4.20	4.50	5.00	4.00	4.60	4.30	4.80
Strong References	4.40	4.00	4.90	5.00	4.10	4.20	4.00	4.10
Total Company Rating	4.82	3.95	4.36	4.66	4.35	4.70	4.10	4.43

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 10 to 24 Providers

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	Medical Communication Systems	Greenway Medical Technologies	e-MDs	GEMMS	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.
Tested Level (Confidence)	* * * * *	* * * * *	* * * * *	* * * * *	* * * *	* * * * *	* * * * *	* * *
Total Overall 5 Star Rating								
Prepared for the ICE Age	4.68	4.33	-	-	-	-	4.25	-
Total PM/EMR/PHR plus Company	4.53	4.50	4.25	4.28	4.22	4.29	4.34	4.26
Total PM/EHR Plus Company	4.52	4.43	4.32	4.29	4.29	4.27	4.24	4.21
Total EMR Plus Company	4.52	4.44	4.44	4.28	4.28	4.26	4.24	4.21
eRX Product	5.00	5.00	5.00	4.00	5.00	4.00	4.00	5.00
Product Functionality								
EHR	4.96	4.85	4.00	4.20	4.59	4.77	4.82	4.58
EMR	4.80	4.75	4.64	4.20	4.47	4.46	4.66	4.47
PMS	4.76	4.82	4.63	4.50	4.63	4.24	4.72	4.62
PHR	4.60	5.00	3.79	4.20	3.79	4.40	5.00	4.60
EMR Lite	5.00	5.00	5.00	4.00	4.82	5.00	5.00	4.67
Total PM/EHR	4.85	4.69	3.80	4.30	4.55	4.52	4.67	4.45
Total PM/EMR	4.87	4.65	4.15	4.20	4.56	4.51	4.58	4.34

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 10 to 24 Providers

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	Medical Communication Systems	Greenway Medical Technologies	e-MDs	GEMMS	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.
Product Delivery								
Installation and Configuration	4.00	4.70	4.00	4.00	4.30	4.50	4.00	4.00
Training	4.20	4.20	4.00	4.00	4.10	4.20	4.00	4.50
Timing of Implementation	4.00	3.50	4.00	4.00	4.00	4.00	4.25	4.50
Customization of Product	4.20	3.50	4.60	4.60	4.00	3.20	4.00	4.50
Flexibility	4.00	3.50	4.60	4.60	4.08	3.20	4.10	4.00
Total Product Delivery	4.08	3.88	4.24	4.24	4.10	3.82	4.07	4.30
Company Stability								
Management	4.20	4.80	4.00	4.00	3.80	4.30	4.00	4.90
Company	4.20	4.85	3.90	3.90	3.75	4.90	4.20	4.80
Future Revenues	4.30	4.20	3.80	3.80	3.75	4.00	3.50	4.90
Future Profitability	4.40	4.20	4.20	4.20	3.50	4.00	3.50	4.70
Number of Clients	3.20	5.00	3.80	3.80	3.50	4.50	3.00	2.20
Growth Opportunity	4.20	3.50	4.20	4.20	3.50	4.00	3.85	4.00
Corporate Vision	4.30	4.80	4.00	4.00	4.80	4.30	4.00	4.20
Strong References	4.00	4.10	4.00	4.00	3.80	4.50	4.80	4.00
Total Company Rating	4.10	4.43	3.99	3.99	3.80	4.31	3.86	4.21

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 3 to 9 Providers

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	Medical Communication Systems, Inc.	Greenway Medical Technologies	e-MDs	Streamline MD	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.
Tested Level (Confidence)	* * * * *	* * * * *	* * * * *	* * * * *	* * * *	* * * * *	* * * * *	* * *
Total Overall 5 Star Rating								
Prepared for the ICE Age	4.68	4.33	-	-	-	-	4.25	-
Total PM/EMR/PHR plus Company	4.53	4.50	4.25	4.28	4.31	4.29	4.34	4.26
Total PM/EHR Plus Company	4.52	4.43	4.32	4.29	4.26	4.27	4.24	4.21
Total EMR Plus Company	4.52	4.44	4.44	4.28	4.27	4.26	4.24	4.21
eRX Product	5.00	5.00	5.00	4.00	5.00	4.00	4.00	5.00
Product Functionality								
EHR	4.96	4.85	4.00	4.20	4.85	4.77	4.82	4.58
EMR	4.80	4.75	4.64	4.20	4.75	4.46	4.66	4.47
PMS	4.76	4.82	4.63	4.50	4.82	4.24	4.72	4.62
PHR	4.60	5.00	3.79	4.20	4.70	4.40	5.00	4.60
EMR Lite	5.00	5.00	5.00	4.00	5.00	5.00	5.00	4.67
Total PM/EHR	4.85	4.69	3.80	4.30	4.69	4.52	4.67	4.45
Total PM/EMR	4.87	4.65	4.15	4.20	4.65	4.51	4.58	4.34

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 3 to 9 Providers

Overall Rating (5 = High, 1 = Low)	NextGen Healthcare Information Systems, Inc.	Medical Communication Systems, Inc.	Greenway Medical Technologies	e-MDs	Streamline MD	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.
Product Delivery								
Installation and Configuration	4.50	4.80	4.56	4.70	4.50	4.56	4.50	3.20
Training	4.30	4.30	4.50	4.50	4.60	4.50	4.00	3.20
Timing of Implementation	4.30	4.20	4.20	4.10	4.70	4.20	4.10	4.20
Customization of Product	4.00	4.95	4.50	4.00	3.95	4.50	4.80	4.50
Flexibility	4.20	4.95	4.70	4.00	3.90	4.70	4.90	4.30
Total Product Delivery	4.26	4.64	4.49	4.26	4.33	4.49	4.46	3.88
Company Stability								
Management	4.40	4.75	4.00	4.40	4.80	4.00	4.90	4.50
Company	4.00	4.90	3.50	4.40	4.70	4.00	4.70	4.70
Future Revenues	3.80	4.90	4.20	4.20	4.30	4.00	4.30	4.90
Future Profitability	3.80	4.90	4.50	4.20	4.00	4.50	4.00	4.90
Number of Clients	3.00	5.00	3.00	4.00	4.80	3.50	4.80	5.00
Growth Opportunity	4.40	4.90	4.20	4.25	4.60	3.80	4.00	4.80
Corporate Vision	4.00	4.80	4.20	4.50	4.40	3.90	4.00	4.60
Strong References	4.65	4.40	4.00	4.90	4.85	3.50	4.10	4.20
Total Company Rating	4.01	4.82	3.95	4.36	4.56	3.90	4.35	4.70

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 1 or 2 Providers

Overall Rating (5 = High, 1 = Low)	Medical Communication Systems, Inc.	e-MDs	Streamline MD	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.	GE Healthcare Centricity	Meditab Software, Inc.
Tested Level (Confidence)	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * *	* * * * *	* * *
Total Overall 5 Star Rating								
Prepared for the ICE Age	4.33	-	-	-	4.25	-	3.90	3.90
Total PM/EMR/PHR plus Company	4.50	4.28	4.31	4.29	4.34	4.26	4.23	4.23
Total PM/EHR Plus Company	4.43	4.29	4.26	4.27	4.24	4.21	4.20	4.17
Total EMR Plus Company	4.44	4.28	4.27	4.26	4.24	4.21	4.21	4.17
eRX Product	5.00	4.00	5.00	4.00	4.00	5.00	5.00	4.00
Product Functionality								
EHR	4.85	4.20	4.85	4.77	4.82	4.58	4.65	4.52
EMR	4.75	4.20	4.75	4.46	4.66	4.47	4.55	4.58
PMS	4.82	4.50	4.82	4.24	4.72	4.62	4.57	4.79
PHR	5.00	4.20	4.70	4.40	5.00	4.60	4.40	4.60
EMR Lite	5.00	4.00	5.00	5.00	5.00	4.67	4.67	4.40
Total PM/EHR	4.69	4.30	4.69	4.52	4.67	4.45	4.53	4.63
Total PM/EMR	4.65	4.20	4.65	4.51	4.58	4.34	4.58	4.51

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Practices with 1 or 2 Providers

Overall Rating (5 = High, 1 = Low)	Medical Communication Systems, Inc.	e-MDs	StreamlineMD	McKesson Practice Partner	eClinicalWorks, LLC	Pulse Systems, Inc.	GE Healthcare Centricity	Meditab Software, Inc.
Product Delivery								
Installation and Configuration	4.50	4.56	4.50	4.56	4.50	3.20	4.00	4.70
Training	4.30	4.50	4.60	4.50	4.00	3.20	4.20	4.20
Timing of Implementation	4.30	4.20	4.70	4.20	4.10	4.20	4.00	3.50
Customization of Product	4.00	4.50	3.95	4.50	4.80	4.50	4.20	3.50
Flexibility	4.20	4.70	3.90	4.70	4.90	4.30	4.00	3.50
Total Product Delivery	4.26	4.49	4.33	4.49	4.46	3.88	4.08	3.88
Company Stability								
Management	4.40	4.00	4.80	4.00	4.90	4.50	4.20	4.80
Company	4.00	3.50	4.70	4.00	4.70	4.70	4.20	4.85
Future Revenues	3.80	4.20	4.30	4.00	4.30	4.90	4.30	4.20
Future Profitability	3.80	4.50	4.00	4.50	4.00	4.90	4.40	4.20
Number of Clients	3.00	3.00	4.80	3.50	4.80	5.00	3.20	5.00
Growth Opportunity	4.40	4.20	4.60	3.80	4.00	4.80	4.20	3.50
Corporate Vision	4.00	4.20	4.40	3.90	4.00	4.60	4.30	4.80
Strong References	4.65	4.00	4.85	3.50	4.10	4.20	4.00	4.10
Total Company Rating	4.01	3.95	4.56	3.90	4.35	4.70	4.10	4.43

AC Group Updated Report
Digital Medical Office of the Future Survey
Review of Top Selling EHR Vendors
Sorted by Name

			CCHIT			AC Group Ranking			
NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
1	ABEL Medical Software Inc	ABELMed EHR-EMR/PM 9	01/28/09	01/28/11	2008				
2	Abraxas Medical Solutions	Abraxas EMR 4.1.	04/17/09	04/17/11	2008				
3	AcerMed EMR		None	None	None	Out of Business	1.00	1.00	$ $ $
4	Advanced Data Systems Corporation	MedicsDocAssistant 4.0.1	02/09/09	02/09/11	2008				$ $ $
5	Agastha, Inc.	Agastha Enterprise Healthcare Software v 1.2	05/21/09	05/21/11	2008				$ $ $
6	Allen Systems Group, Inc. (ASG)	ASG-Medappz iSuite v4.0	03/20/09	03/20/11	2008				$ $ $
7	AllMeds, Inc.	AllMeds EMR Version 8	06/17/09	06/17/11	2008	Oct-09	-	3.67	$ $ $
8	AllscriptsMisys, LLC	Allscripts Professional EHR 8.2	01/08/09	01/08/11	2008	May-08	4.15	4.14	$ $ $ $
9	AllscriptsMisys, LLC	Enterprise 11.1.6	03/26/09	03/26/11	2008	May-08	4.33	4.34	$ $ $ $ $
10	AllscriptsMisys, LLC	Allscripts MyWay 2008	02/22/08	02/22/11	2007				$ $ $
11	AllscriptsMisys, LLC	Misys EMR 9.10	02/22/08	02/22/11	2007	May-08	3.13	3.16	$ $ $ $
12	AmazingCharts.com, Inc.	Amazing Charts 5	05/29/09	05/29/11	2008	May-08	-	3.60	$ $
13	American Medical Software	Electronic Patient Charts 20	11/12/08	11/12/10	2008				$ $ $
14	Amicore		None	None	None	Out of Business	1.00	1.00	$ $ $

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NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
15	Aprima Medical Software, Inc	Aprima 2010 2010	06/04/09	06/04/11	2008	Jan-09	4.02	4.00	$ $ $
16	AssistMed, Inc.	EZChart 1.2.0.0	09/30/08	09/30/10	2008				$ $ $
17	athenahealth, Inc	athenaClinicals 9.15.1	06/02/09	06/02/11	2008				$ $ $
18	Axolotl Corporation	Axolotl's Elysium 9	05/19/09	05/19/11	2008	Jan-09	-	3.10	$ $
19	Benchmark Systems	MD-Navigator Clinical 5.0	12/11/07	12/11/10	2007				$ $ $
20	BizMatics Inc	PrognoCIS 1.81	04/30/07	04/30/10	2006	May-08	-	3.46	$ $ $
21	BMD Services Inc.	E-Paperless Practice V2.01	04/30/07	04/30/10	2006				$ $ $
22	Business Computer Applications, Inc	PEARL EMR 6.0	04/30/07	04/30/10	2006	Oct-05	-	3.10	$ $ $
23	CareData	The CareData Solution 2.7	02/18/08	02/18/11	2007				$ $ $
24	Catalis, Inc	Accelerator Graphical Health Record 4.4	01/29/07	01/29/10	2006				$ $ $
25	CentriHealth, Inc.	CentriHealth Individual Health Record (IHR) Release 2009.1.17	07/01/09	07/01/11	2008				$ $ $
26	Cerner Corporation	Cerner Millennium Powerchart/PowerWorks EMR 2007.19	04/22/09	04/22/11	2008	Jul-09	3.91	3.88	$ $ $ $
27	CHARTCARE, Inc.		None	None	None	Oct-09	-	3.42	$ $ $

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NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
28	ChartLogic, Inc.	iAchieve EHR Version 2008	04/30/07	04/30/10	2006	Oct-09	3.60	3.54	$ $ $
29	Clinisolutions Inc.		None	None	None	Out of Business	-	1.29	$ $ $
30	Clinix Medical Information Services LLC	ClinixMD 7.1	01/29/07	07/29/10	2006				$ $ $
31	Community Computer Service, Inc.	MEDENT 18.1	09/30/08	09/30/10	2008				$ $ $ $
32	Complete Medical Solutions, LLC	MyWinmed EMR 1.2	06/25/09	06/25/11	2008				$ $ $
33	Conceptual MindWorks, Inc.	Sevocity Version 08	05/26/09	05/26/11	2008				$ $ $
34	Connexin Software Inc,	Office Practicum 8.1	04/10/09	04/10/11	2008				$ $ $
35	CPSI (Computer Programs and Systems), Inc.	Medical Practice EMR 14	10/23/06	10/23/09	2006				$ $ $
36	Criterions, LLC	Criterions 1.0.0	05/29/09	05/29/11	2008				$ $ $
37	CureMD Corporation	CureMD EHR 10	04/29/09	04/29/11	2008	Oct-09	4.16	4.15	$ $ $ $
38	Cyperrecords		None	None	None	Oct-09	-	3.43	$ $
39	Daw Systems, Inc. - ScriptSure		None	None	None	Oct-09	-	3.30	$
40	digiChart, Inc.	digiChart OBGYN 7.0	03/20/08	03/20/11	2007	Oct-09	-	3.04	$ $ $ $
41	DocSite		None	None	None	Out of Business	-	3.05	$ $ $

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NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
42	Doctations, Inc.	Doctations v1.0106062008	06/24/08	06/24/11	2007				$ $ $
43	Document Storage Systems, Inc. (DSS)	vxVistA V1.0	04/30/07	04/30/10	2006				$ $ $
44	Dr. I-Net Corporation		None	None	None	May-05	-	2.00	$ $ $
45	Dr. Notes (out of Business)		None	None	None	Out of Business	-	1.00	$ $ $
46	eCast Corporation	eCast EMR 7.0	09/21/07	09/21/10	2007	Oct-09	-	3.65	$ $ $
47	eClinicalWorks	eClinicalWorks 8.0	09/30/08	09/30/10	2008	Oct-09	4.24	4.24	$ $ $
48	Eclipsys Corporation	Sunrise Ambulatory 4.5C SP5	04/22/08	04/22/11	2007	Oct-09	3.60	3.75	$ $ $ $ $
49	Eclipsys Practice Solutions	Eclipsys PeakPractice 1093	01/22/09	01/22/11	2008	Oct-09	3.54	3.50	$ $ $ $
50	Eclipsys Practice Solutions	MediNotes "e" 5.2	01/24/08	01/24/11	2007	May-08	-	3.53	$ $ $
51	EHS, Inc	CareRevolution 5.2a	06/20/08	06/20/11	2007				$ $ $ $
52	Electronic Claims Processing Inc. d/b/a PBF Online	MedcomSoft Record UE (V 4.5)	05/15/08	05/15/11	2007				$ $ $
53	e-MDs	e-MDs Solution Series 6.3	02/03/09	02/03/11	2008	Oct-09	4.29	4.28	$ $ $
54	eMedicalFiles, Inc	MDAware 2.2	04/30/07	04/30/10	2006	Out of Business	-	1.18	$ $ $
55	Encite, Inc	TouchChart 3.3	01/29/07	01/29/10	2006				$ $ $

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Sorted by Name

			CCHIT			AC Group Ranking			
NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
56	EncounterPRO Healthcare Resources, Inc.	EncounterPRO EHR 5	07/18/06	01/18/10	2006				$ $ $
57	Epic Systems Corporation	EpicCare Ambulatory EMR Spring 2008	09/30/08	09/30/10	2008	Oct-09	4.55	4.54	$ $ $ $ $
58	Experior Healthcare Systems		None	None	None	Jan-09	3.35	3.30	$ $ $
59	Gateway Electronic Medical Management Systems (GEMMS)	GEMMS ONE G1.07	10/28/08	10/28/10	2008	Jan-09	4.29	4.28	$ $ $
60	GE Healthcare	Centricity Electronic Medical Record 9.2	06/11/09	06/11/11	2008	Oct-09	4.20	4.21	$ $ $ $
61	GE Healthcare	Centricity Enterprise 6.7	06/24/08	06/24/11	2007	Oct-09	4.10	4.07	$ $ $ $ $
62	GE Healthcare	Centricity Practice Solution 9.0	06/24/08	06/24/11	2007	Oct-09	3.97	3.95	$ $ $ $ $
63	Glenwood Systems LLC	GlaceEMR 3.0	05/11/09	05/11/11	2008				$ $ $
64	gloStream, Inc.	gloEMR 5.0	04/10/09	04/10/11	2008			3.4	$ $ $
65	gMed, Inc.	gCare 4.0 Release 6.3	06/17/08	06/17/11	2007	Oct-09	4.15	4.13	$ $ $ $
66	Greenway Medical Technologies, Inc.	PrimeSuite PrimeSuite 2008	09/30/08	09/30/10	2008	Jan-09	4.32	4.44	$ $ $ $ $
67	Health Highway		None	None	None	Jan-09	-	3.33	$ $ $
68	Health Probe		None	None	None	Jan-09	-	3.29	$ $ $
69	Health Systems Technology, Inc	MedPointe 9	05/07/09	05/07/11	2008				$ $ $

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NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
70	Healthland, Inc.	Physician Practice Documentation (PPD) 9.0.0	06/13/08	06/13/11	2007				$ $ $
71	HealthPort	HealthPort EMR V9.0	05/01/08	05/01/11	2007	Jan-09	3.59	3.58	$ $ $
72	HealthTec Software, Inc	HealthTec Fusion 4.4	01/29/07	01/29/10	2006				$ $ $
73	Healthvision Corporation					Oct-08	-	3.69	$ $
74	Henry Schein Medical Systems	MicroMD EMR 7.0	12/19/08	12/19/10	2008	Jul-07	3.21	3.24	$ $ $
75	HIT Services Group	Acumen EHR 5	12/11/07	12/11/10	2007				$ $ $
76	Holt Systems Inc.					May-08	-	3.36	$ $ $
77	Indian Health Service	Resource and Patient Management System 2008	06/30/08	06/30/11	2007				$ $ $
78	INFINITE SOFTWARE SOLUTIONS INC. [D/B/A: MD-REPORTS]	MD-REPORTS 9i	07/08/09	07/08/11	2008				$ $ $
79	Ingenix	Ingenix CareTracker 6.2	06/11/08	06/11/11	2007				$ $ $
80	Integritas, Inc.	STIX EHR Release 9.1	04/09/09	04/09/11	2008				$ $ $
81	Integrity On Site LLC, dba DocuTAP	DocuTAP EMR and Practice Management Solution 2.8.2	06/06/08	06/06/11	2007				$ $ $
82	Intelligent Medical Systems, Inc.		None	None	None	May-05	-	3.30	$ $ $
83	Intivia, Inc.	InSync 4.1	06/26/08	06/26/11	2007				$ $ $

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NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
84	Intuitive Medical Software	UroChart EHR 3.0	03/13/09	03/13/11	2008	May-09	-	3.98	$ $ $
85	iSALUS Healthcare	OfficeEMR 2009	06/15/09	06/15/11	2008				$ $ $
86	JMJ Technologies		None	None	None	May-05	-	3.50	$ $ $
87	Kryptiq		None	None	None	Oct-05	-	-	$ $
88	LighthouseMD		None	None	None	May-08	3.43	3.40	$ $ $
89	LSS Data Systems (Lake Superior Software)	Medical and Practice Management (MPM) Suite Client/Server 5.6	05/21/09	05/21/11	2008	Feb-09	3.66	3.65	$ $ $ $
90	Marshfield Clinic	CattailsMD Version 5.9	06/04/09	06/04/11	2008				$ $ $
91	McKesson Provider Technologies	Lytec MD 2009	09/30/08	09/30/10	2008	Jan-09	4.273200241	4.26	$ $ $ $
92	McKesson Provider Technologies	Medisoft Clinical 15	09/30/08	09/30/10	2008	Jan-09	4.27	4.26	$ $ $ $
93	McKesson Provider Technologies	Practice Partner 9.3	09/30/08	09/30/10	2008	Jan-09	4.273200241	4.26	$ $ $ $
94	McKesson Provider Technologies	Horizon Ambulatory Care 9.4	07/18/06	01/18/10	2006	Jul-07	3.75	3.71	$ $ $ $ $
95	MDLAND	MDLAND Electronic Health Record and Practice Management Systems 8.0	04/30/07	04/30/10	2006				$ $ $
96	MDTablet LLC	MDTABLET 2.6.7	04/30/07	04/30/10	2006	Oct-09	3.39	3.40	$ $ $
97	MED3OOO, Inc.	InteGreat EHR Release 6.3	06/25/09	06/25/11	2008	Jan-09	4.09	4.10	$ $ $

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NO	Company	Product	Date Certified	Certification Expires	Certification	Last Updated by AC Group	5 Star Ranking - PM/EHR Plus Company	5 Star Ranking EMR Only Plus Company	Price
98	Medappz, LLC	iSuite 4.0	03/20/09	03/20/11	2008				$ $ $
99	MedAZ.net	MEDAZ 60720.001	01/29/07	01/29/10	2006				$ $ $
100	MedConnect	MedConnect EHR 1.0	06/30/09	06/30/11	2008				$ $ $
101	Medflow, Inc.	Medflow EMR Version 7.1	05/19/09	05/19/11	2008				$ $ $
102	Medical Communications Systems, Inc. (MCS)	mMD.Net EHR 9.0.9	07/18/06	01/18/10	2006	Jan-09	4.43	4.44	$ $ $
103	Medical Informatics Engineering	WebChart 4.23	07/18/06	01/18/10	2006	Apr-09	-	3.99	$ $ $
104	Medical Messenger	Medical Messenger Astral Jet EMR 3.7.1	04/30/07	04/30/10	2006				$ $ $
105	Medical Office Online, Inc.		None	None	None	May-05	3.28	3.26	$ $ $
106	Medicat, LLC	Medicat 8.8	01/29/07	01/29/10	2006				$ $ $
107	Medicmatics Inc	XUMIX VERSION 1.0	07/18/09	07/18/11	2008				$ $ $
108	Medi-EMR		None	None	None	Jan-09	3.38	3.34	$ $ $
109	MedInformatix, Inc.	MedInformatix V7.0	10/28/08	10/28/10	2008	Apr-06	3.32	3.27	$ $ $ $
110	MediSYS for Physicians, Inc.	MediSYS EHR 1.0	06/30/09	06/30/11	2008				$ $ $
111	Meditab Software, Inc.	Intelligent Medical Software (IMS) 12	05/07/09	05/07/11	2008	Apr-09	4.17	4.17	$ $ $ $

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112	MedLink International, Inc	MedLink TotalOffice 3.1	09/30/08	09/30/10	2008				$ $ $
113	MedNet System	emr4MD Version 6.0.2	06/22/09	06/22/11	2008	May-06	-	3.90	$ $ $
114	MedPlexus, Inc.	MedPlexus EHR 9.2.0.0	09/30/08	09/30/10	2008				$ $ $
115	MedSym Inc.	HemOncPro 4.2	01/29/07	01/29/10	2006				$ $ $
116	meridianEMR	meridianEMR 3.6.1	04/30/07	04/30/10	2006	Feb-09	3.69	3.66	$ $ $
117	Mountain Medical Technologies, Inc.		None	None	None	Dec-09	-	3.85	$ $ $
118	MTBC (Medical Transcription Billing Corporation)	MTBC EMR 4.0	05/11/09	05/11/11	2008				$ $ $
119	NCG Medical Systems, Inc.	dChart EMR 4.5	01/29/07	01/29/10	2006				$ $ $
120	Netsmart Technologies	Avatar PM 2006 Release 02	10/23/06	10/23/09	2006				$ $ $
121	NexTech Systems Inc.	NexTech Practice 2010 9.3	06/24/09	06/24/11	2008				$ $ $
122	NextGen Healthcare Information Systems, Inc.	NextGen EMR 5.5.27	09/30/08	09/30/10	2008	Jul-09	4.52	4.52	$ $ $ $ $
123	Nightingale Informatix Corporation	Nightingale On-Demand V8.2	02/22/08	02/22/11	2007	May-08	-	2.34	$ $ $
124	Noteworthy Medical Systems	NetPractice EHR 7.0	04/02/09	04/02/11	2008	Dec-08	3.94	3.92	$ $ $ $ $
125	Noteworthy Medical Systems	NetPracticeEHRweb 7.0	06/16/09	06/16/11	2008				$ $ $

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126	Nuesoft Technologies, Inc.	NueMD EHR 5.2	05/05/08	05/05/11	2007				$ $ $
127	Nuesoft Technologies, Inc.	Nuevita EHR 5.2	05/05/08	05/05/11	2007				$ $ $
128	Ochsner Clinic Foundation	Ochsner Clinical Workstation 1.9.8	06/30/08	06/30/11	2007				$ $ $
129	OD Professional		None	None	None	May-06	3.34	3.31	$ $ $
130	OIS	OIS EMR 4.1	04/17/09	04/17/11	2008				$ $ $
131	OmniMD	OmniMD EMR 6.0.5	04/30/07	04/30/10	2006	Oct-09	3.58	3.47	$ $ $
132	Orion		None	None	None	May-04	-	3.50	$ $ $
133	Partners Healthcare System	Longitudinal Medical Record (LMR) 5.1.1	04/30/07	04/30/10	2006				$ $ $
134	Pegasus Healthcare Holdings		None	None	None	Jan-09	-	3.54	$ $ $
135	Physician Advantage	GenesysMD EHR 2.0	07/27/07	07/27/10	2007				$ $ $
136	Point and Click Solutions, Inc.	OpenChart 8.0	04/30/07	04/30/10	2006				$ $ $
137	Polaris Management, Inc.	EpiChart 5.2	04/30/07	04/30/10	2006				$ $ $
138	PracticeIT		None	None	None	Jan-09	-	2.91	$ $
139	PracticeOne	e-Medsys - Electronic Health Record (EHR) 5.2	04/17/09	04/17/11	2008	Jan-09	3.78	3.76	$ $ $ $
140	PracticeXpert		None	None	None	May-06	-	3.77	$ $ $

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141	Praxis EMR, Inc	Praxis V4.0	07/31/06	01/31/10	2006				$ $ $
142	Prime Clinical Systems	Patient Chart Manager 5.5	06/24/09	06/24/11	2008				$ $ $
143	Pulse Systems	Pulse Patient Relationship Management 4.1	09/30/08	09/30/10	2008	Jan-09	4.21	4.21	$ $ $
144	Purkinje	CareSeries EHR 2.0	07/27/07	07/27/10	2007	Jan-09		2.50	$ $ $
145	Quest EHR		None	None	None	Apr-09	-	3.24	$ $ $
146	QuickMed, Inc.		None	None	None	May-05	-	3.10	$ $ $
147	Sage	Sage Intergy EHR v5.5	04/09/09	04/09/11	2008	Jan-09	4.07	4.06	$ $ $ $ $
148	San Diego Hospitalist Physician Corp.	Xpert EMR 2.0	05/14/09	05/14/11	2008				$ $ $
149	Scribe Healthcare Technologies, LLC		None	None	None	Jan-09	-	-	$ $
150	Secure Infosys, LLC	MyEMR 2.0	06/24/09	06/24/11	2008				$ $ $
151	Sequel Systems, Inc.	SequelMed EMR V7.50	04/30/07	04/30/10	2006				$ $ $
152	Silk Information Systems, Inc.	SILK 4.2	02/06/09	02/06/11	2008				$ $ $
153	SOAPware, Inc.	SOAPware 2008 SOAPware 2008	06/12/08	06/12/11	2007				$ $
154	Spring Medical Systems, Inc.	SpringCharts EHR 9.5	01/29/07	07/29/10	2006	May-07	-	3.56	$ $

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155	SSIMED	EMRge 7.0 Release 1.0	06/20/08	06/20/11	2007	May-08	3.67	3.63	$ $ $ $
156	STI Computer Services, Inc.	ChartMaker Clinical Version 3.2	03/23/09	03/23/11	2008				$ $ $
157	StreamlineMD, LLC	StreamlineMD 9.0.9	07/18/06	01/18/10	2006	Aug-09	4.26	4.27	$ $ $ $
158	Stryker Imaging		None	None	None	May-08	3.70	3.65	$ $ $
159	SuiteMed	SuiteMed Intelligent Medical Software 12	05/07/09	05/07/11	2008	Jan-09	4.17	4.17	$ $ $ $
160	Symphony Corporation	Symphony Plus EMRx 1.00	05/21/09	05/21/11	2008				$ $ $
161	SynaMed, LLC	SynaMed EMR 5.487	04/30/07	04/30/10	2006	May-07	3.43	3.45	$ $ $ $
162	Total OutSource, Inc.	ezEMRxPrivate 7.00	05/21/09	05/21/11	2008				$ $ $
163	TransMed Network, Inc.	TransMed CS 3.0	06/20/08	06/20/11	2007				$ $ $
164	UNI/CARE Systems, Inc	Pro-Filer 2007.0.0	04/30/07	04/30/10	2006				$ $ $
165	Universal EMR Solutions	Physician's Solution 3.0	04/30/07	04/30/10	2006				$ $ $
166	Universal Software Solutions, Inc.	VersaSuite 7.5	01/29/07	01/29/10	2006				$ $ $
167	US Department of Defense (DOD)	AHLTA 3.3	04/30/07	04/30/10	2006				$ $ $ $
168	Utech Products, Inc.	Endosoft 3.0.3.5	04/30/07	04/30/10	2006				$ $ $
169	VersaForm Systems Corp		None	None	None	May-08	-	2.95	$ $ $

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170	VIP Medicine, LLC	SmartClinic 16	09/30/08	09/30/10	2008				$ $ $
171	Visionary Medical Systems, Inc.	Visionary Dream EHR 7.1	01/29/07	07/29/10	2006	Jan-09	3.46	3.45	$ $ $ $
172	Waiting Room Solutions	Waiting Room Solutions Practice Management System 3	04/30/07	04/30/10	2006				$ $ $
173	Wellogic and GBA Health Network Systems	Wellogic Consult and GBA MEDfx Release X and MEDfx v3.0	03/26/08	03/26/11	2007	May-08	-	3.88	$ $ $
174	Workflow.com	Workflow EHR 2.1	04/30/07	04/30/10	2006	Jan-09		2.55	$ $ $
175	WorldVistA	WorldVistA EHR VOE/ 1.0	04/30/07	04/30/10	2006				$ $ $

19. Transforming healthcare delivery

Community based EHRs eventually will transform healthcare by providing physicians and other care providers access to clinical information for all patients in a given region – across a decentralized, heterogeneous technology environment including hospitals, clinics and small practices. But as EHRs search for a way to prove their value, gain acceptance and get started in today's social, financial and political climate, they must demonstrate incremental progress as they move along this path towards a complete, accurate, real-time data exchange. Identifying and linking medical records throughout the region based on demographic matching (e.g., name, address, date of birth) is a logical first step. This approach, commonly using Community Master Patient Index (unique patient identifier) technology, is already successfully deployed in various segments of the healthcare delivery system in the United States and Canada. It matches and aggregates medical records and information across participating systems without requiring either existing (e.g. SSN) or new (e.g. national health number) common identifiers to locate and match patient information. The sophisticated algorithms – tuned to the system's geographic population and adapted to the available information – are a necessary component for data linkage and exchange in a RHIO or an HIE. In today's hot-button privacy environment where a new, front-page case of identity theft emerges every week, this is a major advantage versus methods that require and potentially expose these key identifiers. But guarding privacy is only one concern. In addition, patient identification technology must be:

- Accurate – relying on probabilistic matching capabilities
- On demand – providing real-time or batch capabilities depending on the technology capabilities of individual providers in the system
- Non-invasive – operating independently of existing systems and infrastructures
- Scalable – supporting real-time searching of databases containing tens of millions of patients
- Easy to implement – deploying in weeks, not years
- Adaptable – adding new sources of information quickly and easily

To highlight the impact patient identification and data linkage can have, let us turn our attention to how a chronic-care patient interacts with healthcare providers today, and how a RHIO/HIE could improve the quality of care he receives.

Implications of the damaged foundation

The existence of patient multiple clinical records within a single community are clear. The ability to create and maintain a community EHR is dependent on the creation of unique patient identifier. The direct impact within a single delivery organization of existent duplication is defined by the set of adverse events that may occur due to its presence. The majority of cases will have little, if any, cost that will actually come to pass. However, the actualized costs when impact does occur can be substantial. Moreover, it is next to impossible to project which duplicate records are more likely to introduce real cost since the progression from an inactive to an active problem is based on many poorly understood factors.

In order to assess the potential harmful impact of medical record duplication, it is helpful to understand major factors at risk.

Risk 1: Poor quality of patient care – The primary risk associated with patient multiple records is the poor quality of patient care. When a patient's clinical history is unavailable in its entirety, the quality of care and patient safety can be compromised. In a community environment, like a RHIO/HIE, the inability to create a complete patient record has shown that healthcare costs increase by over 18% while the chance of adverse clinical reactions increases by 76%.

Risk 2: Reduced ROI for strategic applications – An important consideration regarding medical record numbers is the fact that all strategic applications that provide longitudinal and enterprise views of patient data rely upon unique patient identifier integrity. Without accurate unique patient identifier assignment, linking data across time and facilities is greatly compromised.

Risk 3: Patient and physician dissatisfaction – Patient multiple records cause damage to a community's reputation and can result in unnecessary repeat testing. Both patients and physicians are frustrated when this happens. Confidence in the system is weakened.

Risk 4: Regulatory noncompliance – The primary agencies involved in compliance are Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Office of the Inspector General (OIG), Drug Enforcement Administration (DEA), Office of the National Coordinator (ONC), Certification Commission for Healthcare Information Technology (CCHIT), payers and state agencies. Each group has its own specific requirements that will impact the healthcare organization with respect to record duplication.

Risk 5: Risk management and legal liability – Intrinsic to patient multiple records is the significant risk for legal exposure. Missing or inaccurate information, such as medications or allergies, could be life-threatening and could invite malpractice claims. The cost of malpractice exposure varies according to state law.

20. Summary:

Duplication of patient records will be increasingly problematic for medical care delivery as organizations move toward the community electronic medical record and the establishment of a community Personal Health Record (PHR). As the EHR becomes the rule rather than the exception, and information from multiple facilities and systems is linked, the unique patient identifier will increasingly become the required method for a file and retrieval system for patient records directly used by clinicians. The ability of Health Information Exchange (HIE) to identify and ameliorate the creation and presence of undesired multiple identifiers and records for patients will be further eroded by expanded automation and lack of access to hard-copy for final assessment. The IntelliFinger™ solution can eliminate these problems.

Conclusion:

Technology is only a tool and, if used effectively, can improve the flow of information and, potentially, improve the efficiency of the physician's practice. However, in reality, if "change" is not embraced, the probability of success is very low. We learned in the 1980's that we needed to change the process of billing for services – or we would not be paid in a timely and effective manner. Therefore, the practice of medicine, from the business point of view, changed. Now, with newer technologies, government regulations, and the right financial incentive, physicians will begin embracing new levels of technology that were not available just 5 years ago. But where does a physician in a small practice turn to learn about the 100's of technology choices? The physician can spend hours searching and evaluating all of the opportunities. Or maybe, in the near future, physicians will be able to look towards leaders within their own medical specialty for guidance and knowledge.

More about the Author:

Mr. Mark Anderson, CEO of AC Group, Inc. is one of the nation's premier IT research futurists dedicated to health care. He is one of the leading national speakers on healthcare and physician practices and has spoken at more than 850 conferences and meetings since 2000. He has spent the last 37+ years focusing on Healthcare – not just technology questions, but strategic, policy, and organizational considerations. For the past eight years, Mr. Anderson has spent the majority of time in the evaluation, selection, and ranking of vendors in the PM/EHR healthcare marketplace and during those seven years has published a semi-annual report on the Digital Medical Office of the Future. His EHR evaluation decision tool has been used by more than 25,000 physicians since 2002.

Besides serving at the CEO of AC Group, Mr. Anderson served as the interim CIO for the Taconic IPA, VP of healthcare for META Group, Inc., the Chief Information Officer (CIO) with West Tennessee Healthcare, the Corporate CIO for the Sisters of Charity of Nazareth Health System, the Corporate Internal IT Consultant with the Sisters of Providence (SOP) Hospitals, and the Executive Director for Management Services for Denver Health and Hospitals and Harris County Hospital District. **Mr. Anderson's expertise includes:**

- Electronic Health Records, Electronic Medical Records, and Practice Management Systems
- Personal Health Records with emphasis on community and regional PHRs
- HIE connectivity models and the associated technology standards and related key market leading vendors
- Familiarity with/knowledge of CCHIT certified software and NIS testing.
- Strong understanding of the Payer/Provider/Consumer (Member) Health Information Technologies (HIT)
- Numerous speeches on ARRA 2009, HITECT, and CMS impacts on HIT
- Understanding of the business process relating to the facilitation of clinical data exchange.
- Clinical and Operational Transformation, necessary to insure effective technology implementations

His experience includes 15+ years as a Hospital CIO, 20+ years working with physician offices, 7 years in the development of physician-based MSOs and IPAs, 17 years with multi-facility Health Care organizations, 15 years Administrative Executive Team experience, 6 years as a member of the Corporate Executive Team, and 9 years in healthcare turnaround consulting. Mr. Anderson received his BS in Business, is completing his MBA in Health Care Administration, and is a Fellow with HIMSS. Additionally, he serves on numerous healthcare advisory positions and has developed programs including:

- Developer of the Six-levels of Healthcare IT for Hospitals and the Physician Office
- Researcher and producer of the 2002-2011 PMS/EHR functional rating system
- Advisory Board and Content Chairman – Future Healthcare, 2007-10
- National EHR advisor to HBMA. 2008-2011
- National Speaker at HIMSS, 1976, 1985, 2000, 2002, 2003, 2006, 2008, 2009, 2010, 2011
- Advisory Board and Content Chairman – Physician and Hospital Bonding Summit, 2008 - 10
- Advisory Board and Content Chairman - Healthcare IT Outsourcing Summit, 2002-08
- Advisory Board and Content Chairman - Patient Safety and CPOE Summit, 2002-06
- Advisory Board and Content Chairman – Consumer Driven Healthcare Conference, 2003, 2004
- Advisory Board and CPOE Chairman - Reducing Medication Errors, 2003, 2004, 2005
- Advisory Board of TETHIC 2003, 2004, 2005
- Advisory Board of NMHCC 2000, 2001, 2002, 2003, 2004, 2005
- Advisory Board of TCBI Healthcare Conference 2000 - 10
- Advisory Board of TEPR and MRI, 2000-09
- Advisor to Future Healthcare Magazine
- Past President of Local HIMSS Boards – Houston, Tennessee, Southwest TX, Kentucky
- Editorial Board of Healthcare Informatics 2001 - 06
- Judge, MSHUG ISA, 1999-2005, TEPR Awards, 2001-2009, TETHIE 2003-05, HDSC 2003-05
- National HIMSS Chapters Committee 2001 - 04
- National HIMSS Fellows Committee 2001, 2002, 2004
- National HIMSS Programs Workgroup Committee 2001, 2002, 2003, 2004, 2007
- Chair HIMSS HIE Education Task Force - 2007-08
- Member of HIMSS RHIO Best Practices - 2007-09

More about AC Group:

AC Group, Inc. (ACG), formed in 1996, is a healthcare technology advisory and research firm designed to save participants precious time and resources in their technology decision-making. AC Group is one of the leading companies, specializing in the evaluation, selection, and ranking of vendors in the PMS/EMR/EHR healthcare marketplace. Twice per year, AC Group publishes a detailed report on vendor PMS/EHR functional, usability, and company viability. This evaluation decision tool has been used by more than 5,000 physicians since 2002. Additionally, AC Group has conducted more than 200 PMS/EHR searches, selections, and contract negotiations for small physician offices to large IPA since 2003.