

American Academy of Allergy, Asthma and Immunology  
American College of Allergy, Asthma and Immunology

## Joint EMR Task Force

### Final Report

The formation of the Joint EMR Task Force coincided with a tipping point for EMR interest in the United States. Driven largely by officials and agencies of the Federal Government, EMR related issues have been discussed in the popular media as well as in the medical press. The focus of these discussions has been the need for technological approaches to medical information management and the limitations of currently available systems due to their evolution as competing proprietary systems. As a consequence of this dramatic increase in public, governmental, payor and practitioner interest in EMR, the job of the Task Force became both harder and more important.

In April, David Brailer, MD PhD, National Coordinator for Health Information Technology, resigned from office. Dr. Brailer's office has been instrumental in advancing Federal efforts to implement and promote medical information management systems, particularly EMR. Dr. Brailer's resignation created some uncertainty about the Federal Government's activity in the area over the next few years.

On May 1, 2006, the Certification Commission for Health Information Technology published its initial criteria and processes to certify ambulatory care electronic medical records systems, [www.cchit.org](http://www.cchit.org). Currently working under a Federal grant, this industry sponsored group will accept applications from May 3 through May 12, 2006 and issue its first certifications in July, 2006. The application fee is \$28,000. The implications of this process are unclear at this time. The fee may be a problem for small vendors. It is likely that the CCHIT certification criteria will become the minimum standards for EMR. Some vendors may leave the market.

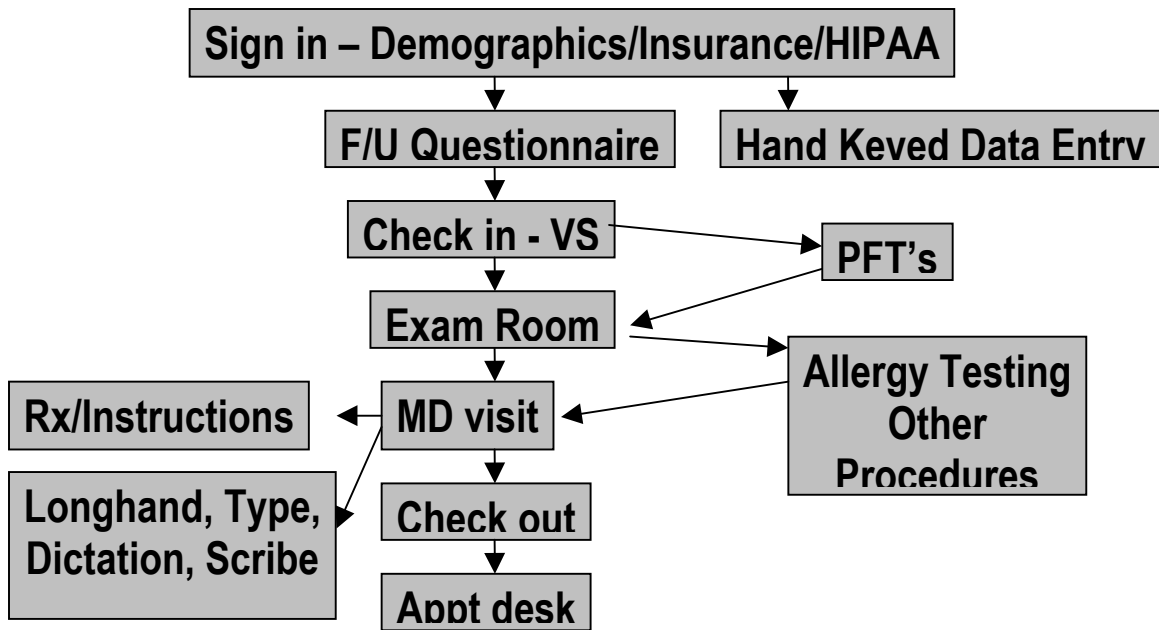
Another issue important to many members is pay-for-Performance. Pay-for-performance is an attempt to modify the behavior of healthcare providers (most commonly doctors) by providing financial incentives for meeting a definition of "quality healthcare." Some examples include prescribing a beta-blocker after a heart attack, monitoring hemoglobin A1C in diabetics and providing controller medications to patients with persistent asthma. In order to get paid under "pay for performance" the practitioner will need to provide data proving that such "quality targets" have been met. Acquiring and transmitting this kind of data may be facilitated by an EMR. Crucial issues in this area are the ease of documenting pay-for-performance outcomes as unique data elements and reporting capabilities of the EMR necessary to get the data back out in a reportable form.

In this context, we offer our final report.

## Choosing an EMR

1. The first and most important issue is why do you want to have an EMR?
  - a. Better documentation of office visits, immunotherapy, phone messages, refills
  - b. Increase the productivity of the practitioners? Doctors/midlevel providers to see more patients per hour worked
  - c. Decision support and treatment protocols to guide providers regarding medical decision making
  - d. Coding support to ensure that documentation supports the level of service billed
  - e. Decrease staff costs by replacing some staff with technology
  - f. Eliminating dictation
  - g. Facilitate research by enhancing patient recruitment (with appropriate permission)
2. Identify the players in your practice or institution
  - a. Knowing the champions and anchors is absolutely critical
  - b. Without a champion, no one will take ownership of the project and it will fail
  - c. If the anchor is the managing partner or the senior partner, office manager or clinical supervisor, every day will be a challenge until they adapt to the system, leave or force everyone to give up
  - d. Consider the doctors, front and back office staff
3. Implementing an EMR will (should) radically change the work flow of a medical office. The process of considering an EMR should begin with an analysis of the current work flow.
  - a. Include pre-visit tasks such as patient scheduling, insurance information and verification and demographics
  - b. Track where the patient's route through the office
  - c. How many stops does the patient make between sign in and check out?
  - d. Where do your current paper records travel? How many people interact with the record for each encounter (visit, phone call, allergy shot)?
  - e. Who does what to the patient and how is it documented?
  - f. How are medications and allergies recorded?
  - g. How is the medical history information collected and recorded?
  - h. How is the physical examination recorded and who enters the information?
  - i. How are written instructions and prescriptions generated?
  - j. Benchmark your current processes to compare efficiency before and after implementation.

Sample work flow



4. Reconsider your reasons for buying and EMR in the context of the work flow evaluation.
  - a. You may want to add to, modify or delete some of the goals of implementing an EMR
  - b. Stop and see if any of your goals can be satisfied with technology already in use. You may be able to achieve one or more of your objectives with little or no investment while you continue to evaluate a comprehensive solution. Partial solutions may increase profitability.
  - c. Beware of investing too much time and money in piecemeal approaches that will be hard to integrate.
5. Begin researching EMR's
  - a. There are many quick, easy ways to buy an EMR but successful implementation will require time and effort; more than you think.
  - b. You need a Chief Information Officer (CIO) no matter how small your practice is. Depending on the interests of the personnel, the CIO could be one of the physicians, the administrator or office manager a nurse or clerk. There needs to be a contact person to connect the office staff with the technology and the vendors/support team with the office.
  - c. There are many internet based tools, both free and for a fee, designed to assist physicians who are selecting EMR's. Among the best are the American Academy of Family Practice and the American Academy of Pediatrics.
  - d. Paid consultants can assist and even direct this process.
  - e. Speak to friends, particularly allergists, who have successfully implemented EMR. Visit an allergist with an EMR, bring a front office and a back office staffer.
  - f. Depending on your location, you may want to find out if a hospital, healthcare delivery system, medical society or physician group can help you.

6. Develop a project plan for purchase and implementation based on your work to date. By now you should have preliminary answers to important hardware and software questions such as will your network be wireless? Will the software reside in your office or on an internet site hosted by you application service provider (ASP)?
  - a. Get input from as many doctors and staff in you office as possible.
  - b. Generate a list of capabilities and features that you want to have. Any EMR should be able to:
    - i. Create a legal medical record comprising permanent, unalterable, time and date stamped entries recording data and the person responsible for entering that data that can be audited.
    - ii. Interface with practice management systems
    - iii. Manage patient specific formulary instructions.
    - iv. Allow simple dictation insertion into placeholders within a visit record.
    - v. Provide E&M coding advice based upon discrete data elements captured.
    - vi. Allow the development of provider specific templates (preferably by the end user).
    - vii. Interface with other vendors, for example major reference labs, spirometers, PDA's and other devices
    - viii. Manage documents such as outside records, reports and letters
    - ix. Provide access to charts for multiple users at multiple locations
    - x. Facilitate patient education
    - xi. Identify patients for research (e.g., clinical trials)
    - xii. Facilitate outcomes research
    - xiii. Incorporate or interface with tools for fax and email communication with patients, physicians and other entities
    - xiv. Conform to laws, ethical guidelines and professional etiquette regarding medical communication particularly with regard to security and privacy
    - xv. Exploit the most current operating system functionalities (e.g., multitasking, et. al.)
    - xvi. Allow easy movement between the "pages" within a patient record to duplicate this virtue of paper records

- xvii. Provide decision support incorporating (or hyperlinking to) drug information, guideline based diagnosis and management recommendations, information about test interpretation
- xviii. Readily access the internet from within the EMR
- xix. Provide patient demographic information, including insurance and formulary status and eliminate redundancy in acquiring and using that information
- xx. Record a patient photo
- xxi. Record clinical photos
- xxii. Permit drawing within the record
- xxiii. Generate an easily compiled and easily revisable problem list (diagnosis list)
- xxiv. Maintain a medication list allowing linking of medications to diagnoses and trending of medications by class, sortable by class, date, diagnosis and prescriber
- xxv. Maintain a list of medication and other allergies that is integrated with the prescription tool
- xxvi. Facilitate the creation of multidisciplinary chart notes - nursing, rotating residents or medical students, attending physician allowing for interim signing (e.g., by students), review and finalization
- xxvii. Incorporate standard (guideline based) and customizable protocols for ongoing care of routine health maintenance and chronic illness
- xxviii. Provide Metric-English height-weight-temperature conversion
- xxix. Incorporate data into growth charts and growth velocity charts
- xxx. Facilitate viewing of images (scanned documents, x rays, flow volume loops) from the EMR
- xxxi. Provide standard and user customizable flow sheets for lab results and other data
- xxxii. Easily create letters from the information in the visit record. There should never be a reason to dictate letters when using an EMR.
- xxxiii. Generate computer-based order forms for lab tests, x-rays, skin testing (all easily customizable by end user)

- xxxiv. Accept patient generated data from surveys or questionnaires (e.g., quality of life or asthma outcome data)
- xxxv. Generate prescriptions for printing, faxing and emailing and include easy production and documentation of refills
- xxxvi. Include recommendations for adult and pediatric dosing with automatic calculation of pediatric doses by weight or body surface area when appropriate
- xxxvii. Perform drug interaction checking with user adjustable sensitivity
- xxxviii. Check prescriptions against a patient's managed care formulary, and suggest alternatives when an off formulary drug has been entered
- xxxix. Facilitate ICD-9 and CPT coding with the ability to search relevant databases
  - xl. Document phone calls including participating staff, medications ordered or refilled, advice given and new plans for subsequent procedures, testing or office visits
  - xl. Medical and standard dictionary and spell checker integrated into all components of the EMR

c. Features of an EMR specific to allergy/immunology

- i. Extract ordering that captures the skin test results to facilitate ordering.
- ii. Data export utility that allows information generated during extract preparation to be sent to an inventory system for managing extract stocks.
- iii. Immunotherapy documentation that captures the extract order information, facilitates use of immunotherapy guidelines and reaction management.
- iv. Immunotherapy dosing schedule progression that can be individualized for the specific patient by the end user.
- v. End user customizability so that practices can adapt a model form to their particular style for skin testing, extract ordering and immunotherapy documentation.
- vi. Easy documentation of allergist specific procedures such as food or drug challenge testing, Rush Immunotherapy, documentation of biologics administration (IVIG, Xolair, etc.)
- vii. Integrated/interfaced spirometry viewable from within the EMR.
- viii. AAAAI Standardized skin testing, extract formulation and immunotherapy administration compliant data entry interfaces that are end user modifiable.

- d. Prepare a Request for Proposals (RFP).
  - i. Who should get your RFP?
    - 1. Know the size of practice that the software company markets to.
    - 2. Does the software have a history of interfacing with your practice management system (PMS)?
    - 3. Is the EHR typically marketed to practices of your size?
    - 4. Does the EHR have favorable published ratings?
  - ii. Consider hardware including your network, workstations, back up device, ancillary data inputs such as a spirometer
  - iii. You may choose to prioritize certain features or functionalities for early implementation. Like any complex software package, many EMR's can meet your goals using only a portion of their functionality. However, the maximum benefits derive from maximally exploiting all the features in a system.
  - iv. If you are considering buying parts of your system from different vendors (not usually a good idea), include requirements for interfaces.
  - v. Be sure to include training and support services in the RFP.
- 7. Evaluate the RFP replies
  - a. You may wish to hire a consultant to help you assess the proposals, negotiate your contract and guide you through implementation.
  - b. Don't look at the price first. This purchase should be for life. If you are concerned that this process will be painful, know that if you have to do it again in a few years, it will be much more costly and painful when you replace a poor choice.
  - c. Issues to evaluate when considering an EMR purchase:
    - i. Size and financial stability of the software developer. Large companies are more likely to survive in the market, small companies may give you more personal attention. There will be a lot of consolidation in this market, most vendors will not survive. This has become more of an issue with the development of EMR certifications. (see below) Beware of vaporware (an EMR that exists only as a demo)!
    - ii. Know your vendor. Are you buying from the software company (e.g.: A4, Epics, GE, Nextgen) or a local or regional VAR (value added reseller)? There is no blanket rule. Software companies may be very service oriented or they may be distant and unresponsive. VAR's may be a great support and ally or they may be grossly incompetent. Get references and speak to them!
    - iii. Consider the vendor (either a software company or a VAR or both) install base; how many installations, how many users and how long have they been on the system? How many users are in practices comparable in size and style to your? The needs of a primary care physician and a specialist are often very different.

- iv. An active user group can be a great resource for problem solving and has more leverage in getting product enhancements. Assess the vendor role in training and implementation.
- v. For many products, there is a direct relationship between the customizability, the length of the implementation schedule and the requirement for end user time and staff effort.
- vi. Contracts should specify what the EMR package will do and what additional products may be needed for the functionalities that you want (e.g., A document management system for scanned documents or a third party package for faxing or secure email.)
- vii. Be wary of any promised feature that is not currently available; it may never happen.
- viii. Contracts should include a delivery date, implementation schedule, performance criteria and what you get if these benchmarks are not met.
- ix. A pre-requisite for final selection and purchase should be an on-site visit to a physician office of similar size and composition where the considered EMR has been in use for a minimum of one year.
- x. An EMR must be cost effective for the physician or physician group. This is easy to say but hard to measure. Speak to peers using the system you are considering.
- xi. Is the software vendor a takeover target or likely to buy other companies to gain market share.
- xii. If you don't recognize the company name (e.g.: GE) ask for a financial report and run a D & B report.
- xiii. Look for spirit of partnership – this is a partnership. Actually, it is more like a marriage.
- xiv. What level of ongoing service will be required? Will the system run itself once installed or will regular maintenance be required.
- xv. Have you ever met 2 providers that want the same thing? You will want to change drop down lists, button names, etc. Can it be customized per physician, per provider, per location? How hard is it? How expensive will it be?
- xvi. What is required of the practice? If there is going to be customization, how physician friendly are the people you will do your customization?
- xvii. What level of response is guaranteed?


#### 8. Schedule a site visit

- a. Ideally, you should visit the office of an allergist/allergy group similar in size to yours.
- b. If possible, visit someone you know.
- c. The difference between a specialty practice and a primary care practice is much greater than the differences between specialty practices.
- d. The needs and resources of a solo practitioner, small group (less than 5 physicians), medium group (5-50 physicians), large group (>50

physicians) and an enterprise (100's of physicians) vary greatly. Visit a practice similar in size to yours.

- e. Spend at least one half of a day.
- f. Bring staff; the office manager/administrator, medical support staff, administrative staff and research staff. They will each have a difference perspective.

9.


[www.medscape.com](http://www.medscape.com)

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**QUESTIONS TO ASK EHR REFERENCES**

**A** list of questions like this one will help you to make the most of your opportunities to talk with other practices about their experience with the EHRs you're considering purchasing.

<p><b>Background</b></p> <ul style="list-style-type: none"> <li>• How many physicians/nurse practitioners/physician assistants are in your group?</li> <li>• How many office sites do you have?</li> <li>• What year did you go live?</li> <li>• What practice management software do you use?</li> <li>• Do you own your own lab? Does the EHR interface with your lab?</li> <li>• How many interfaces do you have with the EHR?</li> </ul>	<p><b>Training &amp; support</b></p> <ul style="list-style-type: none"> <li>• How long does it take a physician to become fully trained/efficient in using the EHR?</li> <li>• How long does it take a medical assistant to be trained?</li> <li>• What kind of support system did you set up for the EHR? How many full-time support people are required?</li> <li>• Have you been happy with the upgrades and support?</li> <li>• Do you have an EHR committee? An IT medical director? Are physician "champions" involved in the maintenance, training and upgrading of your EHR?</li> </ul>
<p><b>Provider usage</b></p> <ul style="list-style-type: none"> <li>• What percent of your providers use the EHR?</li> <li>• What functions do most/all of your providers use?</li> <li>• Do your providers still dictate?</li> <li>• What has been the most frustrating thing about the EHR for the providers?</li> <li>• What has been the best thing?</li> <li>• How much individual physician customization is there?</li> <li>• Are you happy with the templates? Were they pre-loaded? How do they get modified?</li> <li>• Have you saved money? Have you broken even?</li> <li>• Does electronic prescribing work?</li> <li>• Does e-faxing work?</li> <li>• How have patients responded to the system?</li> <li>• Can your physicians access the system from home? How do they do this?</li> </ul>	<p><b>Implementation &amp; hardware</b></p> <ul style="list-style-type: none"> <li>• Did the implementation go smoothly? How long did it take?</li> <li>• Do you have a wide area network (WAN)? How much bandwidth is used?</li> <li>• Was the EHR preloaded with CPT and ICD-9 codes? Was it preloaded with formularies?</li> <li>• What hardware do the physicians use? What hardware do the medical assistants use?</li> <li>• If you are using a wireless network, how well does it work?</li> <li>• How much of the paper chart did you scan or input into the EHR? How did you do it?</li> <li>• Do you still use paper? If paperless, how long did that take?</li> </ul>
<p><b>Satisfaction</b></p> <ul style="list-style-type: none"> <li>• Would you buy this system again?</li> <li>• What would you do differently?</li> </ul>	

Source: Fam Pract Manag © 2005 American Academy of Family Physicians

10. The alphabet soup of EMR

- a. RHIO – Regional Health Information Organization
  - i. A collaborative effort of hospitals and physicians.
  - ii. The Federal government (at this time) encourages the development of RHIO's.
  - iii. Within an RHIO, large institutions may provide assistance to practices for the implementation of EMR.
- b. CHITT – Certification Commission for Healthcare Information Technology
  - i. An industry created organization.
  - ii. Operates under government contract to evaluate EMR's. Defines certain standards of performance for functionality, interoperability and privacy/security.
  - iii. Will evaluate EMR's against its standards and publicize the results.