



EHR Implementation in Ambulatory Care

**A White Paper by the
HIMSS Ambulatory Paperless Clinics Work Group**

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Introduction

The President's Executive Order issued in April, 2004 calls for widespread use of electronic health records for all Americans by 2014. Yet adoption rates for this technology remain surprisingly low. The CDC's National Center for Health Statistics announced in the summer of 2006 that while nearly one quarter of the nation's physicians (23.9 percent) reported using full or partial electronic health records (EHRs) in their office-based practice, just one in ten physicians (9.3 percent) used EHRs with the four basic functions (e-prescribing, computerized provider order entry, automated reporting of test results, and physician documentation) considered necessary for a complete EHR system.¹ Many researchers and groups, including the HIMSS Global Task Force, have examined existing barriers that hinder EHR adoption. In the United State and in other countries, four common barriers have been identified: communication, standardization, funding and interoperability.² This report offers differing experiences and perspectives of ambulatory care practices that have adopted, or attempted to adopt, health information technology into their daily medical practice. While some practices have clearly struggled to become paperless, others have enjoyed great success. It is from their stories and case studies that we can contribute to a larger body of knowledge that will ultimately help more medical practices successful adopt EHRs.

The different aspects of EHR implementation addressed in this paper include what to do with the paper record; choosing appropriate technology; project management; configuration needs; training needs; the case for quality; and return on investment.

What to Do with the Patient Record

Planning for a new electronic patient record generally begins with a discussion about what to do with the old paper record. This is a complicated decision based on numerous factors. What follows is one clinic's innovative method for moving data from the paper record into an electronic one. Generally speaking, this is done via a mix of scanning and abstracting.

One of the obvious benefits of implementing an EHR is the elimination of the paper-based patient charts and all of the costs and inefficiencies associated with them. When Roswell Pediatric Center in Alpharetta, Georgia implemented the Noteworthy Medical Systems EHR in 2001, they worked with the implementation team to plan and execute a coordinated transition from paper-based to electronic charts for each of their 38,000 patients. Once the transition was complete, Roswell was able to ship all paper-based charts off site. Roswell now uses the EHR for each of their 90,000 patient visits annually.

Roswell's transition was carefully planned and coordinated. The first step was determining which information to enter by hand and which could be simply scanned into the EHR. To make this decision, the implementation team identified the information

necessary for the EHR to provide clinical decision support. A Critical Data Checklist (CDC) was created that listed the items to be hand-entered. Immunization history, allergies, current medications and growth histories, among other items made the checklist. It was important that these items be hand-entered into the Noteworthy EHR and stored in structured database format so that Roswell could take full advantage of well-care reminders, immunization forms, and growth graphs that had been set up in the system.

To enter the designated information into the electronic chart Roswell brought in six part-time employees to help. While most of these employees had no clinical training, they did have prior experience on Roswell's front desk and were therefore familiar with their paper-based patient charts. Each day they would enter the information for patients with checkups the following day according to the Critical Data Checklist. When the patient arrived for their checkup, Roswell staff would route the paper-based chart to the practitioner for comparison with the newly created electronic chart. When inconsistencies were found, the practitioner corrected them during the encounter so the paper-based chart could be retired.

Once the practitioner was convinced that all pertinent information had been hand entered, he or she signed the Critical Data Checklist and from that point on, only the electronic chart was used for that patient. In total, the process of pulling paper-based charts prior to patient check-ups and use of the Critical Data Checklist lasted several months. Ultimately, Roswell's approach began to pay dividends as patients returned for additional well-child checkups and the patients' electronic chart was complete. After six months, the six part-time employees were no longer needed and the front desk personnel had enough time to enter patient history according to the CDC as sick-child visits were scheduled.

In an effort to remain paperless, Roswell began scanning incoming clinical documents shortly after go-live. Many of the 1,500 paper documents received each day are now scanned into the patient's electronic chart after being reviewed and signed by a practitioner. Roswell also scans much of its administrative documentation into the EHR as well, making the practice completely paperless.

Appropriate Technology

Other critical decisions made early in the life of the project concern the type of technology that will support the EHR. Most clinics will require the help and expertise of an information technology professional to ensure that the office network is of sufficient quality to support the EHR and to establish safe and secure practices for maintaining highly confidential patient data.