

## **Empower by ECDS will improve quality, efficiency, and reimbursement in the ER**

### **Choosing the Best Electronic Medical Record**

Evidence justifying the adoption of electronic medical records (EMR) in hospitals is abundant. The difficulties lie not so much in presenting the business case, but rather in sifting through the plethora of systems available on the market. There are many resources available to help stakeholders decide. The Department of Health and Human Services, at the request of President George W. Bush, created the Office of the National Coordinator for Health Information Technology, which was given the responsibility of certifying private sector health information technology products, and subsequently created the Certification Commission for Health Information Technology (CCHIT). Focused on the evaluation of the functionality, interoperability, and safety of various EMRs on the market, CCHIT has four stated goals with respect to certification: 1) Reducing the risk of healthcare IT investment by physicians and other providers, 2) Ensuring compatibility of healthcare IT products, 3) Guaranteeing an ROI at the very minimum of improved quality, and 4) Protecting the privacy of a patient's health information record. So far, CCHIT has only evaluated and certified outpatient EMRs. Certification for inpatient EMRs will begin sometime in 2007.

On the private sector side, a company called KLAS independently monitors vendor performance through the active participation of thousands of hospitals. Using 28 performance indicators and 12 business indicators, KLAS helps healthcare personnel make informed healthcare IT decisions based on accurate, honest, and impartial vendor performance evaluation.

### **Factors to Consider**

Based on a review of the literature, the following issues among others should be considered when evaluating EMRs, in particular EMRs designed for the ED, also known as emergency department information systems (EDIS):

#### **A. Reputation**

- 1) Is the system nationally recognized?
- 2) Is the system in use in a number of hospitals throughout the country?
- 3) Are the reviews positive from those who use the system?

#### **B. Implementation Style**

- 1) Is the system 100% comprehensive?
- 2) Do the implementers mandate a "Big-Bang" approach?
- 3) Do the implementers seek and understand the importance of pre-implementation physician and staff ownership of the project?

### C. Risk Management Features

- 1) Does the EDIS have risk management features such as computerized physician order entry (CPOE), clinical decision support systems (CDSS), allergy detection, and critical value alert systems?
- 2) Does the system have real-time tracking capabilities?
- 3) Does the system have automatic coding features?
- 4) If risk management features are available, are they set up in such a way that the use of these features is mandatory?

### D. Automatic Coding Features

- 1) Can the system help ensure compliance with Joint Commission and CMS documentation requirements?

## **EmpowER by ECDS**

The EmpowER system by ECDS has a number of features that differentiates this system and makes it superior to all other EDIS on the market. In addition to being nationally recognized by Joint Commission and KLAS, the EmpowER system has a number of risk management features and an implementation style that puts this EDIS in a class all by itself. The following is a compilation of some of the unique features of EmpowER. Each feature is followed by objective literature findings that support the use of each feature.

### **100% Comprehensive System**

EmpowER is an EDIS that is 100% comprehensive, meaning every piece of clinical information from triage through discharge is captured without redundancy. Many EMRs on the market today consist of incomplete or separate modules. Multi-modular systems pose a number of problems for the emergency department. First, such systems can take years to implement as each module must be slowly phased-in. Second, incomplete or separate modules means information documented in one module may not be crossing over into another module. As a result, staff is forced to document the same piece of information multiple times in different areas of the EMR. In essence, the piece-meal approach traditional utilized in EMRs makes the ultimate goal of real-time tracking and communication difficult to achieve.

### **Big Bang Approach**

EmpowER is the only EDIS to use a mandatory 100% Go-Live methodology with implementation. Also known as the "Big Bang Approach," ECDS is the only company to mandate such an implementation style for its customers. The Big Bang Approach, coupled with the 100% comprehensive nature of the EmpowER system, ensures all physicians and nurses will be live on the system and using all components of the system on the first day of implementation. ECDS is passionate about the Big Bang Approach, and the company will not install the system in hospitals unwilling to adopt this all-at-once

approach. ECDS guarantees full functionality with integrated bridges to the core HIS day one.

ECDS's implementation style is compelling, especially since studies conducted by the Agency for Healthcare Research and Quality have concluded that single-module deployments are successful, and possibly even preferable to the traditional staged approach to implementation. Further evidence has shown that when done correctly, rapid IT rollouts have transformed emergency departments and entire hospitals, and yield better care and improved financial performance.

The single biggest challenge to a successful deployment is getting doctors and nurses on computers 24x7. A Big Bang Approach supports the momentum of the EMR project and alleviates prolonged change management and anxiety caused by phased rollouts. A phased rollout allows time for doctors or nurses to put up barriers to success by resisting change. With an eye on risk management, a Big Bang Approach provides a significant benefit in that the change associated with moving to computers is accomplished in a shorter time period. A prolonged module approach continuously alters the workflow as each piece of the solution is brought online. From a risk management perspective, this creates a significant challenge because an incomplete ED EMR cannot provide drug-drug interaction and allergy detection, differential diagnosis for high-risk chief complaints, in-depth reporting for ED workflow and staff management. Additionally, the Big Bang Approach more quickly achieves the financial benefit of increasing net collections through the automatic charge capture and coding, reduction of paper needs, and elimination of the cost of transcriptions services. Any solution that advocates a phased implementation approach becomes a cost center to the hospital until the solution is complete.

### **Computerized Physician Order Entry (CPOE)**

In evaluating the EmpowER system, there are a number of risk management features we believe will be helpful in mitigating risk in the ED. First, EmpowER has the ability to interface with CPOE. A reduction in medical errors, improvements with drug interaction checking, improved compliance with formulary guidelines, improved charge capture, and better efficiency when ordering medications can all be realized when using CPOE. Brigham and Women's hospital, using its Brigham Integrated Computing System, realized annual savings of \$950,000 that were solely attributed to event triggers within its CPOE system. Prompts that suggest dosage changes or provide suggestions on medications are additional benefits of CPOE. After implementation of CPOE, physicians had a by and large positive response to CPOE, with an overall score of 5.7 on a scale from 1-7.

### **Clinical Decision Support Systems (CDSS)**

EmpowER has built-in CDSS features such as clinical support with recommendations at the point of care, and clinical pathways with standardized medical orders for ED and in-patient hospital admissions. The integration of CPOE and CDSS has been shown to

reduce length of stay, decrease drug costs, further reduce medication errors, and decrease the time needed for appropriate treatments. Designed to directly aid in medical decision-making, CDSS matches a patient's characteristics to a computerized knowledge base. Specific diagnostic assessments or recommendations are generated, and providers can use this information to assist in diagnostic and treatment decisions. There are a number of different CDSS applications on the market, including drug-alerts, rule based alerts, reminders, clinical guidelines, and clinical pathways.

EMRs that use CPOE in conjunction with CDSS ensure physicians have access to the latest evidence-based recommendations. This combination of risk management tools has been shown to help ensure that patients are treated according to best practices, while also ensuring that care is rendered in an efficient manner. By receiving the most appropriate care, patients are treated faster and discharged more quickly. CDSS has been found to reduce treatment time for patients with critical lab values, and these systems have also been shown to reduce prescription costs. The Institute of Medicine is a champion of computer-aided decision support systems and has noted that embedding knowledge in tools, and training clinicians to use those tools to augment their own skills and experience, can facilitate the consistent application and expanding science base to patient care.

### **Real-Time Tracking Capabilities**

EmpowerER uses a tracking system that follows and traces a patient's movement and clinical chart throughout the hospital. Since EmpowerER is a 100% comprehensive system, tracking includes all information from triage through discharge in real time. Many decision-makers in the healthcare industry favor the idea that a lack of space and staff are contributing to ED dilemmas rather than problems associated with inefficiency. Even after expanding clinical care space, increasing inpatient capacity, and adding staffing resources, many hospitals continue to be plagued with delays in admitting patients from the ED. These issues were the focus of a study published in the **Journal for Healthcare Quality**.

A hospital in the southeastern United States continued to experience harmful inefficiencies despite increasing space and adding staff. The authors of the study suspected the culprit was inefficiency, and through a quality improvement team, process improvement methods aimed at identifying and correcting delays in the system were implemented. Automated communication systems were introduced to facilitate communication between the emergency department, admissions, and housekeeping staffs. After such measures, the ED realized statistically significant reductions in the length of time from bed request to bed assignment, bed request to physical disposition, and median length of stay.

In addition to causing throughput problems, inefficiencies often contribute to poor quality. This in turn negatively affects patient satisfaction. In fact, assessing the cost of poor quality is one of the concepts of Six Sigma and Lean methodologies. One area of focus for these methodologies is the ED walkout rate. A hospital in Bridgeport, CT

estimated raw charges for each ED walkout patient at between \$800 and \$1,000. Since the hospital usually recovers about half of all charges, walkouts were estimated to cost \$400 per person. After implementing processes such as real-time tracking measures (found in EmpowerER and other systems), the hospital realized a 50% reduction in its walkout rate, and a savings of nearly \$300,000 per year.

### **Automatic Coding Features**

In addition to risk management features, EmpowerER also has automatic coding functions. These features ensure 100% government compliance with Joint Commission documentation requirements, and 99% accuracy with CMS documentation requirements. Thus, EmpowerER can help to improve charge capture and decrease billing errors, improve cash flow, and enhance revenues. Studies have shown that inaccurate coding results in a loss of 3-15% of revenue, and evidence shows that EMRs help with accurate and timely capture of charges. Improvement in charge capture, and more accurate coding, can increase cash flow and enhance revenue by reducing the number of days outstanding in accounts receivable, and also reduce the number of lost or disallowed charges.

### **IN Summary: EmpowerER As An Effective Risk Management Tool**

PHTS believes EmpowerER is an effective tool in preventing patient injury and mitigating medical malpractice claims. EmpowerER was designed by ED physicians and staff to address three main areas of risk management on the front end:

- 1) Patient injury
- 2) Litigation associated with medical malpractice
- 3) Costs incurred with litigation

### **Minimizing Patient Injury**

The EmpowerER system has built-in checks and balances created to help reduce the risk of patient injury. Flags automatically appear and prompt users to address potential concerns such as drug-to-drug interactions, allergies, abnormal vital signs, and critical lab values. With respect to EMTALA regulations, EmpowerER has a feature that ensures a final physician assessment is performed before discharge, and the results of this assessment are documented. If any abnormal findings are noted on the final assessment, the provider must address these issues before the patient's record can be printed for the patient to be discharged. Many of the other advantages of EmpowerER, such as CPOE, CDSS, documentation of real-time tracking, and general improved defensibility of documentation can substantially reduce the risks in the emergency department.

### **Reducing the Probability of Litigation**

The 100% comprehensive nature of EmpowerER ensures appropriate, efficient communication among ED staff and other departments. EmpowerER can assist in coordinating treatments between caregivers, reducing wait times, and increasing clinical presence at the bedside. In essence, EmpowerER may help to alleviate many of the common patient complaints regarding long wait times and fragmented care. As described

above, EmpowER will also reduce billing errors and thus reduce the likelihood that a patient will receive a bill for services in error. This will reduce the likelihood that a bill will add insult to injury and increase patient concern and suspicion.

### **Reducing Defense Costs**

The EmpowER emergency documentation information system will effectively ensure the patient record is complete, legible, and in compliance with any state and accrediting agency mandates. The ability of EmpowER to accept total documentation of patient care is imperative in an era where many medical malpractice cases are found in the plaintiff's favor due to incomplete or illegible handwriting. While an ED may still receive requests for production of a patient's ED record, experience has shown that a complete and legible patient record will expedite the legal process and correspondingly reduce defense costs.

### **Conclusion**

The Joint Commission, in a recent publication, praised EmpowER and noted that this EDIS is a role model for the industry. As the publication notes, "The medical record is at the heart of many investigations and surveys in an emergency department because it captures a patient's visit from beginning to end...It's no wonder that when an ED reorganizes its system to improve efficiency, it often starts with a close look at the way in which the patient's medical record is completed." From increasing revenues by capturing charges, to averting expenses associated with poor quality, to mitigating risk, EmpowER provides myriad tangible and intangible benefits.