



ARE HOSPITALS READY

FOR MEANINGFUL USE OF EHR'S?

The Meaningful Use
Challenge and Opportunity



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The Health Information Technology for Economic and Clinical Health Act (HITECH) section of the American Recovery and Reinvestment Act (ARRA) contains incentive payments from Medicare and Medicaid to physicians in ambulatory practices and hospitals for “Meaningful Use” of “Certified” Electronic Health Record (EHR) systems; eventually non-EHR users would face penalties. EHR systems are an essential element to provide the safest level of care, monitor progress of patients with chronic diseases, ensure the population gets preventive services, avoid duplicate tests and procedures, and reduce the administrative costs of delivering, reporting and paying for care. The goal of the HITECH incentives is to raise the level of effective use of EHR systems while protecting privacy and security of records. The incentive payments are substantial; a typical 275-bed hospital would be eligible for about \$6 million in incentive payments, and after 2015 they also could face substantial penalties for not being meaningful users of EHRs. The expectation is that the percent of hospitals with comprehensive EHRs will rise from about 10 percent in 2009 to 55 percent by 2014. Hospitals can begin to qualify for incentive payments in October of 2010 – which raises two questions, “How ready are they to become qualified?” and “What are the major gaps to fill?”

During the fall of 2009, we asked executives at 58 hospitals across the U.S. to report their readiness for HITECH incentives on 50 indicators of readiness grouped into five general categories:

1. Use of a certified product
2. Current use of capabilities required for meaningful use
3. Standards adoption
4. Quality management and reporting
5. Privacy and security protection

The questions included in the survey are attached as an appendix.

The Bottom Line

The hospitals in our sample are only about halfway toward meeting the requirements of meaningful use, and only one-quarter meet at least 70 percent of the readiness indicators. Readiness is highest in the areas of privacy and security protection and lowest in use of the specific EHR capabilities needed. Many hospitals report they have the required capabilities but they are not in active use. About two-thirds have assessed where their current systems have gaps that must be filled to achieve meaningful use; although 70 percent have systems with capability for Computerized Physician Order Entry (CPOE), only 8 percent have CPOE in routine use throughout the hospital and at least 75 percent of orders being entered by physicians. Less than half have a plan to convert to the new coding standard ICD-10, and most quality reporting still relies on manual review of patient records. Smaller hospitals are less likely to be ready than larger ones; gaps are widest for use of required capabilities and quality management and reporting.

Use of a certified product	67%
Current use of capabilities required for meaningful use	32%
Adoption of standards	54%
Quality management and reporting	54%
Privacy and security protection	73%

The Details

Certification

The incentives require use of a certified system. Currently EHR systems are certified by a body called Certification Commission for Health Information Technology (CCHIT). The Office of the National Coordinator for Healthcare IT (ONC) proposes a modified set of certification standards that would specify only what capabilities a system needs to have rather than how these capabilities are designed, but that would have more detailed requirements for interoperability and security. In the survey we asked about the availability of core capabilities that are needed for meaningful use, whether the EHR product is the latest version from the vendor, whether the product currently has CCHIT certification, and if the hospital had identified gaps in their product and communicated the gaps to their vendor. While 93 percent of hospitals were using a product that was CCHIT certified, about 70 percent reported that their systems were capable of supporting CPOE, clinical decision support, physician and nurse documentation and the medication process. Only about two-thirds had identified gaps in their systems capabilities to meet the requirements for meaningful use and 54 percent were using the latest version of the software. Therefore, upgrading might be required to meet the criteria for meaningful use.

Meaningful Use

To get incentive payments, the capabilities of the EHR system need to be in use. This is the area of lowest readiness. We asked the hospitals to report on their current use of some of the key capabilities required for meaningful use: CPOE, clinical decision support, electronic medication reconciliation, nursing documentation, maintenance of an electronic problem list by physicians and clinical information exchange with caregivers outside of the hospital. None of these capabilities were in use in more than half of the hospitals in the survey. CPOE (that is mentioned specifically as a requirement in the ARRA legislation) is in routine use in at least two hospital units in only 19 percent of the hospitals surveyed; 8 percent have CPOE throughout the hospital and in use by physicians for 75 percent of all orders. No hospitals under 100 beds had CPOE even in two units, and none of the mid-sized hospitals (100-300 beds) had CPOE throughout the hospital and used for 75 percent of orders. Physicians maintained an up-to-date problem list in coded form in only 19 percent of the hospitals; since an up-to-date problem list is essential to run decision support rules and to track compliance with recommended practices, this is a gap that must be closed. Overall readiness in using EHR systems had the lowest scores of any of the HITECH incentive areas.

Adoption of Standards

Adoption of standards for coding information in an EHR is essential for data to be combined and compared across settings, used for quality reporting and used in decision support logic. Transmission standards are essential to meet the goal of effective electronic communication across settings and systems. In 79 percent of the hospitals surveyed all clinical applications conform to the same set of data and transmission standards, and 77 percent require compliance for any new clinical applications. One of the challenges with getting to meaningful use is that hospitals also need to convert to a new clinical coding system for billing (ICD-10) during the same time frame; yet less than half the hospitals have a plan in place to migrate applications to ICD-10. Only 44 percent use the LOINC coding system recommended by the ONC standards committee, and only 27 percent use the recommended National Council for Prescription Drug Programs (NCPDP) version 10.5 standard for medications. Since medications and laboratory data are specifically cited in the legislation as being required, significant progress needs to be made in these two areas.

Quality Management and Reporting

The requirements for meaningful use include the capability to report on quality of care using data in the EHR. This will increase the accuracy of quality reporting (no transcription errors), reduce the effort required for reporting (currently much of the data is manually extracted from patient records using scarce nursing resources) and improve the timeliness of information on performance (quality could be reviewed while care was being delivered). We asked about the current methods for capturing and reporting on quality and the extent to which these methods used data from the EHR. While almost all hospitals (89 percent) report on core quality measures, in only about half the hospitals did more than 50 percent of the reported data come directly from an EHR system. One reason for this may be that a large percentage of the information required for quality reporting is derived from the patient problem list and notes that are maintained by physicians. Only 21 percent of the hospitals had captured at least 50 percent of this physician documentation electronically. Less than one-third of the hospitals tracked quality of care measures during the patient's stay, and in less than half the hospitals this information was available within 15 days after the close of each reporting period (monthly or quarterly). Overall, hospitals met slightly over half (54 percent) of the indicators of readiness for quality measurement and reporting.

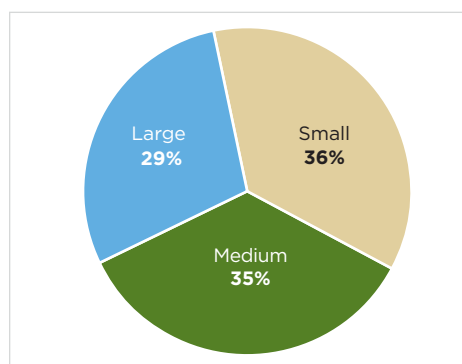
Privacy and Security Protection

Protecting privacy and securing patient information is a current requirement for both paper and computerized records. However, the new push toward adoption of EHRs has increased the emphasis and introduced new requirements for reporting breaches and for tracking disclosure of health information. There will also be increased penalties for violations. We asked questions about privacy and security practices, and about compliance with proposed new requirements. Ninety-eight percent of respondents have a policy in place to limit the disclosure of protected health information, but only 52 percent employ encryption technologies to render data unreadable or unusable in the case of unauthorized access. About 75 percent have a process to notify individuals of a breach and a similar percentage can provide patients with an account of all disclosures of their health information (to other providers or payers) over the last three years. Only 40 percent report that there is clear and broad awareness of the new civil and criminal penalties in the HITECH legislation.

The Methodology

To get a representative sample of hospitals, we collaborated with two state hospital associations and one hospital alliance to distribute surveys to their members. Additional surveys were obtained from CSC clients. Our sample included 58 hospitals broken down by size as indicated below. Data was self-reported using a paper form or an online survey instrument.

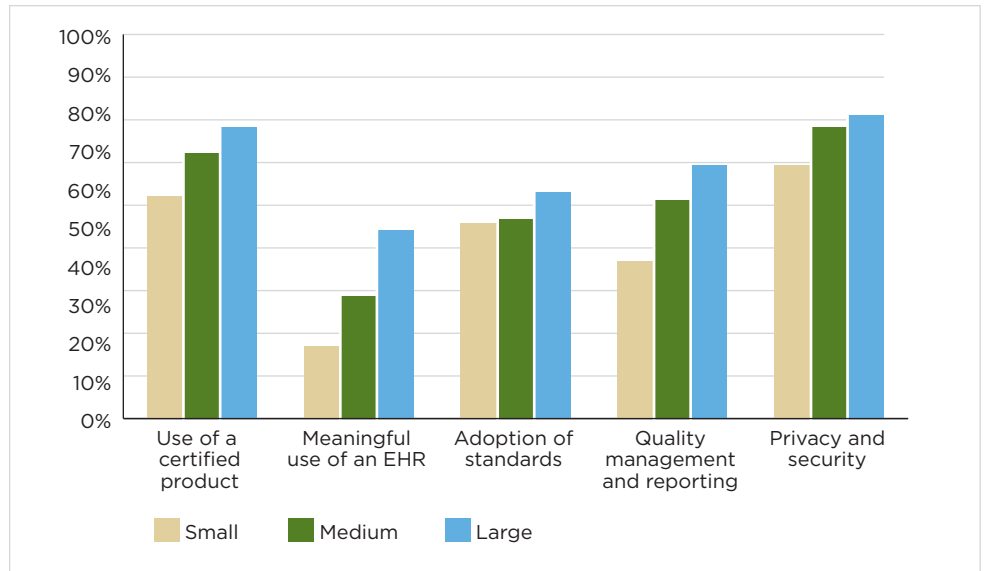
Composition of Survey Respondents



Interpretation of the Results

Our survey oversampled large hospitals, which report higher readiness levels.

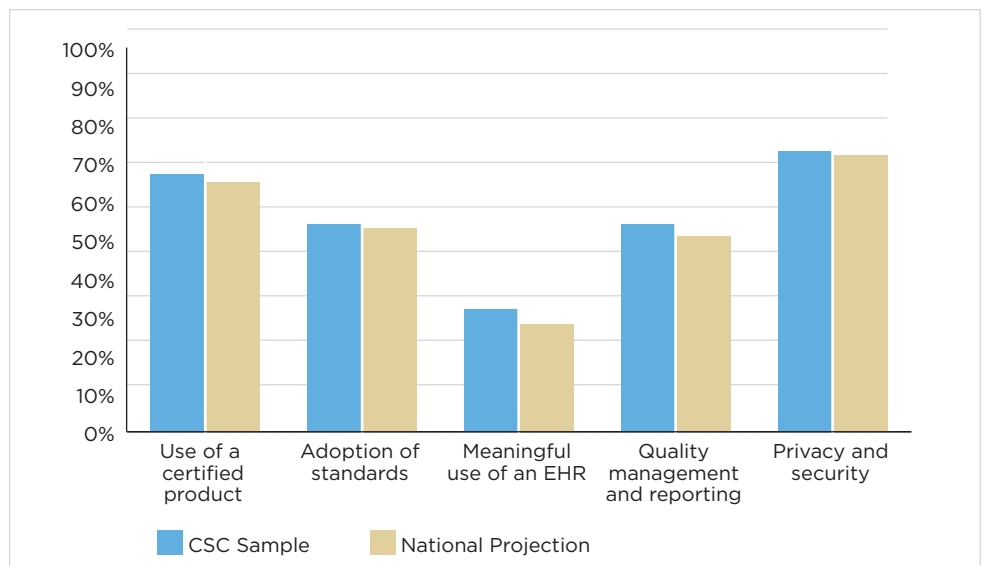
Progress Towards Readiness – Survey Respondents by Size



Smaller hospitals are further behind and have fewer resources available to address the requirements of meaningful use.

A projection of our results to the U.S. distribution of hospitals by size indicates that our survey likely overstated readiness slightly.

Progress Towards Readiness – Survey Respondents and National Projection



The fact that the data is self-reported may also introduce a bias to positive responses.

The survey results indicate that hospitals in the US have to make substantial progress along many dimensions to meet the requirements for incentives payments for meaningful use of EHRs. There is much more than money at stake, since the availability of EHRs and electronic patient data are key to improving quality, coordination and efficiency of health care. There are some bright spots: Most hospitals have taken steps to protect the privacy and security of patient information, and 25 percent of the hospitals in the sample had already achieved at least 70 percent of the indicators; the highest scoring facility had achieved 89 percent.

Appendix — Survey Questions

Use of a Certified Product

1. The hospital's inpatient core vendor is capable of supporting CPOE, clinical decision support and medication reconciliation. (1 point)
If "Yes" — The hospital uses an inpatient system that has been certified by CCHIT. (1 point)
2. The hospital's inpatient systems support clinical documentation for physicians and nurses and eMAR with bar-coding. (1 point)
3. The modules of the hospital's inpatient EHR system currently in use reflect the latest version available from the vendor. (1 point)
4. The hospital identifies and tracks unmet requirements of current systems, if any, and communicates these to the vendor. (1 point)
5. The hospital has a plan to address gaps in requirements. (1 point)
If "Yes" — It has also set aside resources and a budget to carry out the plan. (1 point)
6. The hospital has a process to learn about successful implementation practices from other hospitals using the same inpatient EHR. (1 point)
If the hospital owns physician practices, then continue on to the next question.
7. The hospital-owned practices use an EHR that supports eRx and quality reporting. (1 point)
If "Yes" — The EHR has clinical documentation and is used to document medication list, allergies, problem list and visit notes. (1 point)

Current Use of Capabilities Required for Meaningful Use

1. Physicians routinely use CPOE on at least two units in the hospital. (1 point)
2. CPOE is implemented throughout the hospital and physicians enter at least 75 percent of all inpatient orders electronically. (1 point)
3. Medication orders do not need to be re-entered manually into the pharmacy system. (1 point)
4. Clinical decision support in CPOE is applied to all medication orders to detect drug-drug contraindications, drug-allergy contraindications, and to ensure accurate dosing. (1 point)
5. Clinical decision support in CPOE is applied to all medication orders to check for appropriate dosing for patients with metabolic considerations (e.g., kidney disease). (1 point)
6. Medication reconciliation is accomplished electronically across the hospital, and the process takes into account information on home medications. (1 point)
7. The hospital exchanges health information (e.g., problem lists, medications, allergies, and results) with caregivers outside of the organization. (1 point)
8. Nurses are electronically documenting vital signs, assessments, care plans, progress notes, and medications administered in all units. (1 point)
9. Physicians actively maintain an up-to-date electronic problem list in a coded format for every inpatient. (1 point)
If the hospital owns physician practices, then continue on to the next question.
10. In the ambulatory practices, all physicians use e-Prescribing to write prescriptions electronically. (1 point)

Standards Adoption

1. The hospital maintains an inventory of all the relevant electronic clinical standards currently being used in the facility. (1 point)
2. There is one set of data definitions in use across all of the clinical applications in the hospital. (1 point)
3. The hospital sends and receives the Continuity of Care Document (CCD) electronically via the inpatient EHR. (1 point)
4. All laboratory test results produced by the hospital laboratory are mapped to the LOINC standard. (1 point)
5. The hospital has standardized the sharing of application data on HL7 version 3.0. (1 point)
6. The hospital has a plan in place for the migration of all clinical and patient accounting applications to the ICD-10 standard. (1 point)
7. The hospital has a written agreement with the inpatient EHR vendor regarding the migration to ICD-10 and other national standards as they are adopted. (1 point)
8. The hospital requires that all new clinical applications incorporate a uniform set of standards. (1 point)
9. All clinical applications in use in the hospital (including ED, ICU, and OR) conform to the same set of data and transmission standards. (1 point)
10. The hospital has standardized on NCPDP Version 10.5 for data sharing in e-prescribing and medication reconciliation. (1 point)

Quality Management and Reporting

1. For more than 50 percent of care measures, eligible patients are tracked concurrently, rather than post-discharge. (1 point)
2. The hospital has the capability to send reminders to patients regarding post-discharge follow-up care. (1 point)
3. More than 50 percent of the quality data captured for mandatory external inpatient reporting comes from the EHR. (1 point)
4. Monthly and quarterly performance results for the hospital are available within 15 days after the close of the business period. (1 point)
5. Physicians enter at least 50 percent of inpatient physician documentation (history and physical, admission notes, progress notes, consult notes, etc.) electronically. (1 point)
6. Clinicians and unit managers in the hospital receive feedback about the quality of the care that they provide on at least a monthly basis. (1 point)
7. Data definitions for electronic data elements used in inpatient quality reporting are consistent across the enterprise. (1 point)
8. Executives and managers have access to an online dashboard that displays organizational performance. (1 point)
9. The hospital scores within the top 20 percent on JCAHO core quality measures. (1 point)
10. The hospital can locally produce reports on core measure performance. (1 point)

Privacy and Security Protection

1. The hospital has written assurance from all business associates (including service providers, PHR vendors, and health information exchanges) regarding privacy practices. (1 point)
2. The hospital can provide patients with an account of all PHI disclosures from the past three years. (1 point)

3. The internal security team conducts a root-cause analysis whenever breaches occur. (1 point)
4. A policy is in place to limit the requesting and disclosure of protected health information (PHI) to authorized individuals. (1 point)
5. The hospital consistently employs encryption technologies to protect PHI and to render data unreadable or unusable in the case of unauthorized access. (1 point)
6. Access to the data center is controlled and the hospital can produce an audit trail of user access on demand. (1 point)
7. There is clear and broad awareness among the hospital staff regarding the new civil penalties and criminal penalties for individuals contained in the HITECH legislation. (1 point)
8. There is a process in place to notify individuals of a breach within 60 days. (1 point)
9. There is a process in place to notify HHS and prominent media outlets in the event of a security breach that affects more than 500 individuals. (1 point)
10. There are specific controls in place or new technologies installed (e.g. thin clients or Virtual Desktop Infrastructure) to move sensitive data away from the local desktop. (1 point)

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