McKESSON
Empowering Healthcare

Measuring Stage 1 Meaningful Use Requirements

Overview

The Health Information Technology for Economic and Clinical Health (HITECH) provisions in the 2009 American Recovery and Reinvestment Act (ARRA) created a tremendous opportunity for physicians, hospitals and health systems to adopt electronic health record (EHR) systems. The legislation includes significant financial incentives designed to accelerate EHR use, and ultimately reduce healthcare costs by improving quality, safety and efficiency. However, the incentives are tied to demonstrating meaningful use of certified EHR technology based on specific measures and milestones that must be documented and reported.

Since the legislation became law, there's been a flurry of activity, including the federal rule-making process for meaningful use and certification. Eligible providers and hospitals that plan to qualify for incentives must demonstrate meaningful use; health information technology (IT) vendors are responsible for achieving EHR certification.

In early 2010, the Department of Health & Human Services published a Notice of Proposed Rulemaking (NPRM)[1] outlining a proposed set of objectives and measures for meaningful use. Extensive public comments were submitted on the NPRM, and additional changes are expected before the rule becomes final in summer 2010. Nevertheless, eligible providers and hospitals that plan to qualify for the first round of incentive payments in 2011 need to plan now for how to demonstrate and document progress against the meaningful use milestones.

Under the proposed rule, eligible providers and hospitals need to report the results of a set of IT functionality measures as part of the demonstration process. These measures are paired with meaningful use objectives – such as using computerized provider order entry (CPOE) or recording smoking status – and apply to eligible providers, or hospitals, or both. Also, one of the meaningful use objectives requires reporting quality measures to the Centers for Medicare and Medicaid Services (CMS). The NPRM includes a proposed list of more than 90 clinical quality measures for eligible providers and another 43 for eligible hospitals.

Supporting Measures with the EHR

A basic assumption in the NPRM is that measuring the quality of clinical care and IT usage should flow automatically from implementing and using an EHR system during patient care. In order for this automation to occur, several prerequisites must be in place:

- The central requirement of **certified EHR functionality** must be installed and deployed throughout the provider organization. An example of IT functionality is nursing documentation.
- That functionality must include the necessary **clinical content** to support the required data collection. For example, to record the smoking status of a patient, a single structured documentation element needs to be in place.
- The functionality must be deployed using a prescribed **workflow and methodology** to help ensure that the data collected is consistent and comprehensive. To build on the example noted above, the prescribed workflow would embed collecting smoking status for all patients age 13 and older in the admission assessment conducted by a caregiver, and it would cue the caregiver that documentation is missing or unconfirmed until properly collected or updated.

These prerequisites are the pillars that support a measure. The relationship is depicted in Figure 1. The example focuses on supporting the proposed IT functionality measure that 80% of

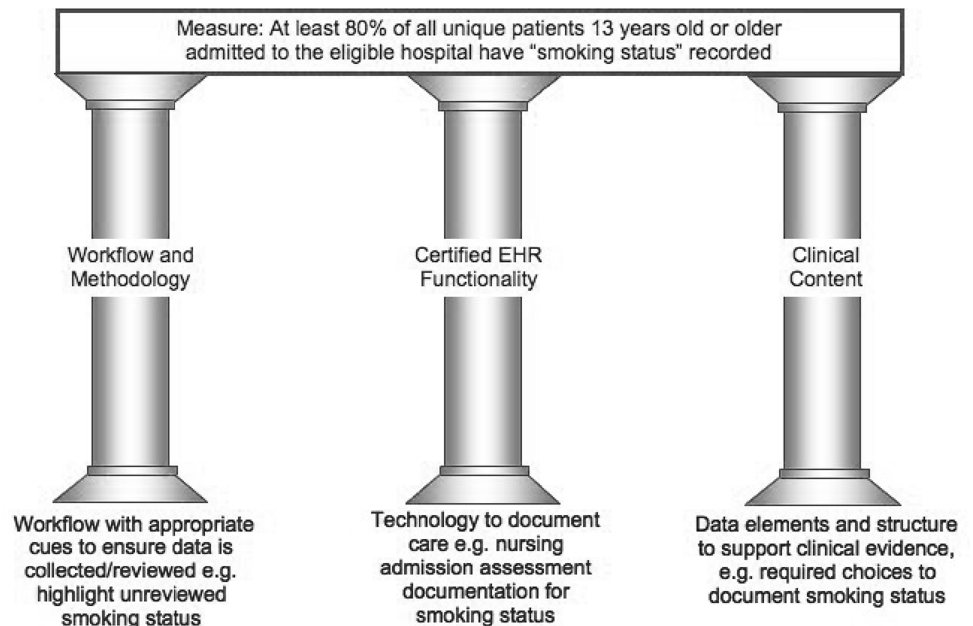

Figure 1: Supporting Measurement

patients age 13 and older have smoking status recorded in the EHR. This particular measure is fairly simple. It can be addressed using a single component of EHR functionality, a single element of clinical content, and straightforward methodology with few instances of branching logic, e.g., is the patient equal to, greater than or less than, 13 years of age? In general, the proposed IT functionality measures share similar characteristics. The proposed clinical measures employ more complicated logic and typically require data from multiple EHR components, combined with complex content, workflow and methodology.

Managing Measures

Within the framework of the NPRM, IT functionality measures not only must be calculated and reported but specific results must be achieved, too. In the previous example, that result is documenting specific findings for 80% of the applicable patients treated during the measurement period. Incentive payments depend on attaining that level of performance. While there has been extensive public pushback on the rigor of the performance goals, as a general principle, measures must always be compared to a reference point, or benchmark, if they are to assist in managing performance. The benchmark may tie to the previous shift, month or year. It may be a comparison against another unit, facility or national standard. Or, it may be a performance improvement goal.

Regardless of the benchmark selected, the measure must be reported to be useful. Additionally, the reporting must reach the people charged with improving performance, and must be done in a timely and appropriate fashion. For measures related to patient care activities, reporting must reach caregivers in real-time. This requirement is why there is an IT functionality measure that requires physicians to receive, during the order entry process, clinical decision support rules related to the clinical quality measures.

Measure	Previous 5 Months					Current Month	Action Trigger
	9-Nov	9-Dec	10-Jan	10-Feb	10-Mar		
ORDER ADOPTION							
Total Orders Entered/Modified	175,486	176,321	176,285	175,187	176,462	175,977	
% Med Orders Entered/Modified	39.20%	39.70%	38.40%	37.20%	38.50%	38.90%	
% Orders Entered/Modified via HEO	23.00%	37.30%	56.30%	62.10%	74.80%	87.00%	90%
Total Verbal Orders Entered/Modified	8,774	8,640	8,462	8,935	8,294	7,039	
Total Written Orders Entered/Modified	143,197	128,009	104,713	66,921	49,586	35,019	
Total Direct Orders Entered/Modified	23,515	39,672	63,110	99,331	118,582	133,918	
% CPOE Orders by Authorized Provider	13.40%	22.50%	35.80%	56.70%	67.20%	76.10%	75%
ORDER ALERTS							
% of Orders with an Alert	1.20%	1.30%	2.40%	1.90%	2.73%	3.10%	
Total Number of Alerts	2152	2339	4277	3375	4864	5502	
% Overrides	95.10%	91.20%	93.70%	88.60%	84.90%	81.5%	80%
% Resulting in Cancelled order	0.74%	1.32%	0.95%	1.71%	2.27%	2.77%	
% Resulting in Discontinued order	0.49%	0.88%	0.63%	1.14%	1.51%	1.85%	
% Resulting in Modified Order	3.68%	6.60%	4.73%	8.55%	11.33%	13.88%	
ORDER SETS							
Total Number of Orders from Order Set	16,500	18387	24651	29344	31002	33571	
% Orders from an Order Set	9.40%	10.43%	13.98%	16.75%	17.57%	19.08%	25%

Figure 2: Monitoring Progress on Meaningful Use Objectives CPOE Adoption

In the smoking status example, reporting functionality must be embedded throughout the EHR to support three primary user roles:

- *Patient/caregiver:* Cues within the clinician's workflow indicate where documentation is missing and remind the clinician to collect it. Typically this function would be built into the admission assessment component of an EHR.
- *Unit/manager:* Reporting to the unit or other manager that a population of patients still needs smoking status collected before they leave the unit. This type of reporting may take the form of a visual tracking board, as a list of patients on the unit or as a worklist for a specific caregiver.
- *Organization/senior manager:* Reporting to the nursing director the rate of smoking status documentation during the past 24 hours, week or month. Typically this type of reporting, or analytics, will support drill down by individual units, caregivers or shifts. By regularly monitoring the measure, the director can address issues of adoption or care processes that affect patient care outcomes. In the case of a measure that affects payments such as meaningful use incentives, the manager can ensure that performance does not drop below required levels. This aggregated, trended reporting is supplied through an organization's enterprise intelligence solution.

IT Functionality Measures

The proposed meaningful use IT functionality measures are largely designed to quantify capabilities and adoption levels. The intent is to record whether: features are activated, tests are completed, EHR components are in use by a percentage of users, or basic data of interest is being collected for a portion of the patient population. Many of the measures include not only numerators and denominators but also target values.

Under the proposed rules, an eligible provider or hospital must report the IT functionality measures to CMS via an attestation process at the end of a reporting period in order to demonstrate meaningful use.

No organization wants to reach the end of a reporting period only to tally up its results and find them deficient. It is therefore essential that EHR functionality be supplemented with robust scorecards that measure the adoption of key EHR components and track internal performance against the full set of IT measures. A well-designed enterprise dashboard should support the analysis of supporting details around all aspects of the meaningful use objectives. For example, it is not enough to simply track the percentage of orders placed by authorizing providers using CPOE. You also need to know who is ordering, what they are ordering, and more importantly, who is not using CPOE. This information is essential to put in place the necessary coaching, training, and system modifications to support adoption, and the attainment of meaningful use. As you progress along the adoption path, your organization may decide to set a more aggressive goal than the proposed Stage 1 meaningful use requirement for CPOE. For an example, see Figure 2.

Clinical Quality Measures

Clinical quality measurement is already a prominent component of The Joint Commission certification process and CMS incentive payment mechanisms such as Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU). However, the computation and submission of measures today is typically a cumbersome, costly, manual process that is almost entirely retrospective. It offers little value to caregivers in improving care processes. The proposed meaningful use framework seeks to revolutionize clinical quality measurement by making it an automatic, low cost by-product of the care process itself. Conceptually, this goal assumes that the required data for measure calculation is captured within the EHR during care and then flows seamlessly to reporting and data submission mechanisms.

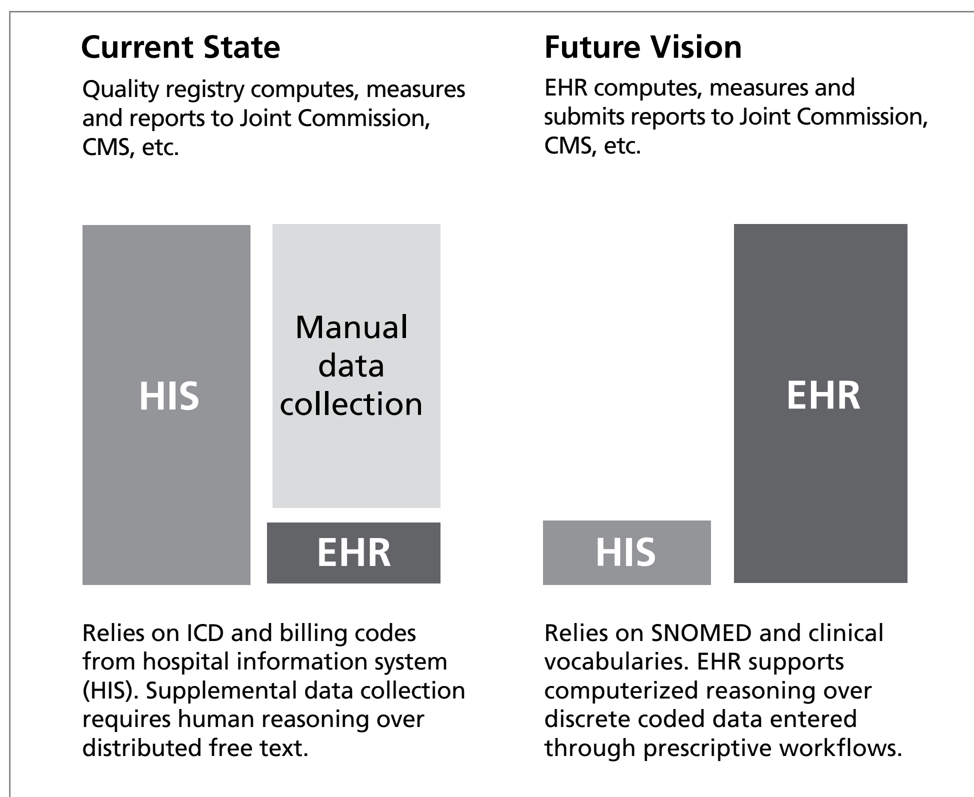

Figure 3: Quality Measurement Transformed

The National Quality Forum (NQF) has assumed a leadership role in the effort to "retool" measure specifications to support automated computation. NQF will begin releasing its work for public comment in mid-summer 2010. In the interim, we can begin to understand the expected future direction of quality measurement by reviewing the work of the Health Information Technology and Standards Panel (HITSP), which was asked by CMS to retool three sets of existing quality measures to use EHR generated data directly. Those 16 measures are included in the NPRM as proposed quality measures for eligible hospitals. Figure 3 depicts the transformative nature of the retooled measures vs. the current process.

The concept is engaging and would enable continuous feedback to caregivers to support quality improvement. In reality, the transition from the current manual process to an automated process is quite complex and may be prolonged over many years, because:

- It takes approximately 18-24 months to develop and roll out a new measure, so "retooling" existing measures for automated collection may take years.
- Not all clinical quality measures will transition to an automated data collection approach immediately. Therefore, the existing largely manual collection and reporting process in place for The Joint Commission and specialty registries will remain time- and labor-consuming for the foreseeable future.
- Many clinical measures depend on data that are outside the scope of the Stage 1 HITECH EHR definition — such as emergency department or surgery data. Thus, there will be an ongoing requirement to merge data from many sources to compute the measures.

– National Hospital Quality Measures specifications today are updated approximately every quarter. In the context of automated data capture, quarterly updates to the clinical content, workflow and patient care processes to capture the data accurately must occur. Most organizations are not yet set up to manage change to the EHR content and workflow with this frequency.

– The costs and risks associated with the submission of flawed data are potentially crippling from an operational standpoint. Hospital staff typically conducts a meticulous review of all data submitted to CMS or used in The Joint Commission certification process to minimize the risk of a failed audit and the consequences. Very few hospital leaders will be comfortable with a fully automated collection and submission process until they have had time to extensively test and audit the results.

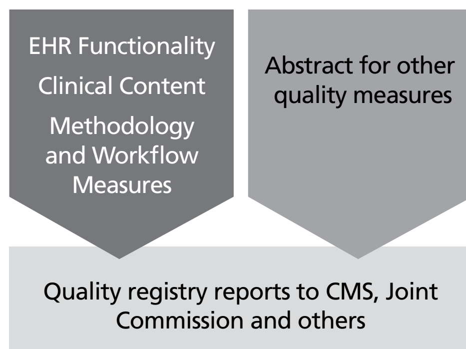

Figure 4: Transitional Quality Measure Reporting

Because of these obstacles and concerns, the process to collect and report metrics will be in transition for some time, resulting in a hybrid process as depicted in Figure 4.

In this model, the EHR supports the implementation of functionality, content and best practice methodology for data collection. Existing quality registries support additional data collection from other data sources and for other measures.

Measure for Management

While the achievement of meaningful use goals is designed to produce tangible patient care results and significant financial incentives, measurement of IT adoption and related quality improvement represents only one aspect of a broader management imperative. Sustainable success is the product of a multifaceted strategy that requires constant care and feeding and the management of an overwhelming amount of new data. Organizations must continue to manage the business of healthcare, including:

– Model revenues and manage the costs of operations in order to remain financially viable beyond incentives

– Demonstrate the competency of the clinical staff

– Ensure that patient care occurs in a timely, efficient manner in the right care setting

– Increase market share

– Recruit and retain qualified employees

More importantly, these business dimensions cannot be measured in silos. The correlation of cost, quality, care coordination and efficiency are necessary to influence decision-making from a holistic view and remove departmental and political barriers to drive transparency to key business processes.

The meaningful use and IT adoption and reporting requirements form a strong foundation on which to build a new approach to managing the business of care. Building an IT infrastructure that encourages the use of technology and provides more time to care for patients is the first step. Another critical factor in the information management maturity journey is transforming the data produced as a byproduct of patient care into actionable intelligence across the enterprise and distributing it to stakeholders when and where they need it to make decisions. This process requires aggregating data from multiple sources and applying healthcare logic and rules. Finally, managing behaviors by instilling the value of information in the people who manage care begins to create a culture of shared accountability for the organizational results.[2]

Meaningful use, if embraced as a foundational catalyst and not a regulatory burden, could well be the driver that changes the face of healthcare. Organizations have the opportunity to partner with their IT vendors to ensure not only meaningful use, but rapid, sustainable performance improvement.

Learn More

To learn more about McKesson's clinical content, workflow and methodology, and supporting analytics that can enable your organization to prepare for and demonstrate meaningful use, e-mail us at stimulusandreform@mckesson.com.

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[1] 42 CFR Parts 412, et al. Medicare and Medicaid Programs; Electronic Health Record Incentive Program; Proposed Rule, Federal Register, Vol. 74, No. 8, 1/13/2010, pp. 1843-2011, http://edocket.access.gpo.gov/2010/pdf/E9-31217.pdf

[2] Adapted from D.A. Marchand, W.J. Kettinger and J.D. Rollins, "Information Orientation: The Link to Business Performance" (Oxford: Oxford University Press, 2000).

This paper outlines McKesson's strategy for supporting providers' meaningful use measurement efforts, and it is not intended as a detailed guide.

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