

Key Points

- Through January 2012, \$3.1 billion was paid out for meaningful use
- Stage 2 requirements are not final, but the direction is clear
 - Almost all menu items from Stage 1 are now core.
 - Most thresholds have been raised
 - There are new requirements: eMAR, patient access to information, and electronic communication, expanded public health reporting
 - The number of menu (selectable) items is much smaller
 - Quality measures are not final
- Organizations should focus on providing capabilities for engaging patients and coordinating care. These requirements are essential not only for qualifying for meaningful use payments, but also for new CMS payment incentives and for succeeding under accountable care

Stage 2 Proposed Requirements

The Notice of Proposed Rule Making (NPRM) for Stage 2 requirements for meaningful use of electronic health records (EHRs) was published in the Federal Register by the Centers for Medicare & Medicaid Services (CMS) on March 7, 2012. There will be a 60-day comment period and then a final rule will be published. The final rule is expected in the summer of 2012.

Summary of Stage 2

As reported earlier, the requirement as to when different stages of meaningful use need to be met was officially relaxed. Those that attest to meaningful use first in 2011 must meet Stage 2 criteria in 2014 and Stage 3 in 2016. All others will be required to demonstrate two years at each stage. **Quality measures are still not final** — but in 2014 they will be submitted electronically.

Quality measures are now a distinct category of meaningful use, and the schedule is not tied to a particular stage; in 2014 any hospital or EP attesting to any stage of meaningful use will need to electronically report the 2014 quality measures. The proposal is that eligible providers (EPs) will submit 12 measures. (Some may be required, others selected from a long list of potential measures.) Hospitals will select 24 measures (50 possible measures are proposed). In both settings, at least one measure will need to be reported from each quality domain: Patient Engagement, Patient Safety, Care Coordination, Population and Public Health, Efficient Use of Resources and Clinical Effectiveness. The final list of quality measures will be published with the final rule.

There are many changes in requirements from Stage 1. The proposed rule generally makes Stage 1 optional (menu) items required (core) in Stage 2. Stage 2 does retain the concept of core and menu requirements for new requirements; for example use of e-MAR is now a core requirement for hospitals and the ability to view images is a new menu requirement. Many of the thresholds from Stage 1 have been raised — some to a higher level than those recommended by the HIT Policy Committee. For example, the requirement for CPOE for medications is 30% in Stage 1; the Policy Committee recommended it be raised to 50% and the proposed rule raises it to 60%. Other new requirements include CPOE for laboratory and radiology orders; the ability of patients to view, download and transmit their health information; and public health reporting to cancer registries and other specialized registries. The CPOE measurement was changed from being based on one order per patient to a percentage of all orders — which will raise the bar considerably. **The only major recommendation from the Policy Committee that was not included in the NPRM was for an electronic physician note for 30% of office visits and 30% of hospital days.** While no longer required for meaningful use, physician notes are a major source of data that will be required for electronic reporting of quality requirements. To ensure that systems certified for Stage 2 can also meet Stage 1 requirements, a few Stage 1 requirements will be modified somewhat from 2014 onward.

Table 1 provides a summary of all the changes in requirements proposed for Stage 2. Hospitals will have 16 core (required) measures and must select 2 of 4 menu (optional) objectives. EPs will have 17 core objectives and be required to select 3 of 5 menu objectives.

Table 1: Summary of Requirements for Stage 1 and Proposed Changes for Stage 2.

Requirement	Stage 1 Final Minimum Requirement	Stage 2 NPRM Minimum Requirement
Maintain medication, problem/diagnosis, allergy lists	80% of patients have an entry or indication of none	No longer separate requirement, must be included in the electronic record for patient access and transmitted at transitions in care
Demographics recorded	50% of patients	80% of patients
Vital signs recorded	50% of patients over 2	80% of patients over 3
Smoking status recorded	50% of patients over 13	80% of patients over 13
Family history	Not required	Menu item: 20% of patients have family history recorded as structured data
Computerized Physician Order Entry (CPOE)	30% of patients have a CPOE medication order if they have any med orders	60% of medication, laboratory and radiology orders entered using CPOE
Info on Advanced Directive	Menu option for hospitals – indicate if patient has advanced directive for 50% of hospitalized patients 65+	Remains menu item for hospitals
Drug-drug and drug-allergy checking	Enabled	Enabled and implemented—now combined as one requirement for decision support
Drug-formulary checking	Menu option	Incorporated as a requirement for e-Rx
Medication reconciliation	Menu option, performed for 50%	Required
e-Prescribing	40% of prescriptions for eligible providers	EP: Required for 65% of prescriptions Hospitals: Menu option: 10% of new or changed meds for discharged hospital patients. Both: Must also include a drug formulary check
Summary-of-care record transmitted between providers at transitions in care	Menu option: performed for 50% of transitions (can be on paper)	Required for 65% of care transitions; must be electronic for 10%
Ability to view images	No requirement	Menu option: 40% of all scans and images available for viewing on the EHR
Secure messaging	No requirement	EPs only. 10% of patients have sent at least one messages to eligible providers
Electronic medication administration (eMAR)	No requirement	Required that 10% of all medication orders for hospital patients are tracked using eMAR
Encounter summaries	50% of office visits within 3 days	50% retained. Changed timing to within 24 hours, specified data elements, must be available on paper or electronic
Electronic copies of discharge instructions	50% of hospital patients who request it	Replaced by requirement that 50% of patients have access (for hospitals and (for EPs 10% of patients have used the capability to access and download their information
Electronic copies of health information	50% of patients who request it	

Table 1 continues

Table 1 continued

Requirement	Stage 1 Final Minimum Requirement	Stage 2 NPRM Minimum Requirement
Incorporate lab information as structured data	Menu option: 40% of lab tests ordered with positive/negative or numeric results	Required for 55% of lab results ordered in hospital or by EP
Provide patient educational materials	Menu option: 10% of appropriate patients	Required for 10% of all office visits and discharged patients. EHR needs to be used to ID materials, can be stored elsewhere
Send reminders for preventive, follow-up care	Menu option for office visits; 20% of patients under 5 or over 65	Required for EPs, 10% of all patients seen in the last 24 months
Patients have access to their information	10% of patients have access to view information from office visits	50% have access and 10% of patients have used the capability to access and download their information
Electronically exchange patient information	Perform one test	Replaced by specific requirement for transitions in care
Decision support rule	One rule	Implement drug-drug and drug-allergy checking and implement 5 interventions related to clinical quality measures
Lists of patients for quality improvement	Menu option: one list	Required
Submit immunization data	Menu option: perform one test	Required: submit data
Submit reportable lab results	Menu option for hospitals, perform one test	Required for hospitals, submit data
Submit syndromic surveillance data	Menu option: perform one test	Required for hospitals, menu option for EPs, submit data
Submit information to cancer registries	Not required	Menu option for EPs only.
Submit information to other specialty registries	Not required	Menu option for EPs only
Conduct security analysis	Conduct analysis	Expanded to include encryption of data at rest

What can we learn from early attesters?

HITECH is viewed as a “real” program. By the end of January 2012, 3,247 hospitals and 188,357 EPs had registered for incentives. This represents 65% of eligible hospitals and 36% of EPs. Since providers only need to register when they are ready to attest to receive payments, many more are assumed to be planning to take advantage of the program in the future.

Payment dollars based on Stage 1 of meaningful use are flowing as well: by the end of January 2012, 1641 hospitals had received Medicare and/or Medicaid payments. Over 41,000 EPs had received either Medicare or Medicaid payments. (EPs can only qualify for one program.)

Where are the challenges with Stage 1?

In Stage 1, hospitals and EPs had core (mandatory) requirements and menu (optional) requirements from which the organization needed to meet defined thresholds of use for a specified number and could defer the rest. In Stage 2, the number of menu items has been reduced, and all but two menu items are new requirements. Tables 2 and 3 below show the Stage 1 items that were not selected for attestation (deferred) or for which an exemption was claimed by at least 50%

In Stage 1, both hospitals and EPs chose to defer meaningful use requirements related to coordinating care and engaging patients.

of EPs or hospitals through December 31, 2011. These requirements will likely be challenging for providers when they are required in Stage 2.

Table 2: Requirements Deferred by Hospitals That Attested to Stage 1 Meaningful Use for Medicare in 2011

Hospital Requirement	Met	Deferred	Exemption
Electronically transmit summary records at transitions in care	7%	93%	0
Submit reportable lab results for public health	16%	77%	7%
Submit syndrome surveillance data for public health	18%	79%	3%
Reconcile medications	25%	75%	0
Provide patients e-copy of their information	32%	Core requirement	68%
Provide patients e-copy of discharge instructions	41%	Core requirement	59%
Provide patients with educational materials	38%	62%	0
Submit immunization data for public health	48%	37%	15%

Table 3: Requirements Deferred by Eligible Providers That Attested to Stage 1 Meaningful Use for Medicare in 2011

EP Requirement	Met	Deferred	Exemption
Submit syndrome surveillance data for public health	3%	70%	27%
Electronically transmit summary records at transitions in care	12%	85%	3%
Send reminders to patients (excludes visit reminders)	22.5%	77%	0.5%
Submit immunization data for public health	35%	20%	45%
Provide patients access to their electronic information	37%	62%	1%
Reconcile medications	41%	56%	3%

In Stage 1, some thresholds only applied for patients who requested information. This led to high exemption rates. However, the Stage 2 measures are not based on patients who request information. Organizations had to test at least one public health reporting measure and were exempt if no public health agencies were able to accept electronic public health information. Therefore, the low rate of attestation to public health measures is understandable in Stage 1. All of the other measures for which less than 50% of organizations attested to meaningful use were related to improving care coordination and engaging patients and families in their care. Care coordination and patient engagement are exactly what will be needed to meet the requirements of accountable care.

Organizational readiness is the main reason for deferring requirements for Stage 1 of meaningful use, but vendor product readiness is also a significant barrier.

Why are organizations not selecting to meet the Stage 1 requirements for engaging patients and coordinating care?

Because of the importance of achieving patient engagement and coordinating care to improve quality and safety and reduce costs, we conducted a survey of IT leaders to find out the reasons these requirements were being deferred. The survey was conducted through CHIME, and responses were received from 80 organizations in December 2011 and January 2012. Sixty percent of the respondents represented individual hospitals, 34% were multi-hospital systems, and 28% represented groups of EPs. (Some responded for both hospitals and groups of EPs.) In total, efforts on behalf of more than 100 hospitals and more than 550 EPs were represented in the survey. Note that the survey did not include any independent small physician practices.

Hospital respondents reported being well on their way to meeting Stage 1 requirements for meaningful use:

- 25% had already attested for Medicare payments
- 52% planned to attest in 2012
- All had plans to attest by 2013

For the Medicaid program (for which first-year requirements are much less stringent), 38% had already attested, 40% planned to attest in 2012, and the remainder planned to attest in 2013.

When asked why they planned to defer menu requirements, one-half of those who responded cited internal operational readiness or process challenges; another 38% cited vendor product readiness. Only one or two respondents cited costs or the fact that the capability was not an organizational priority as a reason for deferring.

The requirements that were most likely to be deferred by the hospital respondents were medication reconciliation, providing a summary-of-care record at transitions in care, and providing patient educational materials. Reporting of clinical quality measures is a core requirement in Stage 1 and the requirements will expand in Stage 2. Physician documentation is the source of much of the documentation needed for Stage 1 quality reporting.¹ The biggest challenge in quality reporting by hospitals was capturing needed data from physician documentation electronically. Thirty-eight percent rated this as “hard” (requiring major process or capability changes) and 47% as “moderately difficult” (requiring moderate changes in processes or capabilities). In contrast, capturing data via electronic nursing documentation was rated as easy by 40%, moderately challenging by 53%, and hard by only 4%. Data analysis for quality reporting was rated as moderately challenging by about 55% and hard by 24% of the hospital respondents.

As a group, IT executives responding to our survey on behalf of EPs reported being behind hospitals in meeting Stage 1 requirements for meaningful use. Only about 10% had met or planned to meet Medicare requirements in 2011 although 55% planned to meet them in 2012. Almost all of the remainder plan to attest in 2013; two physician groups were not planning to meet meaningful use requirements. More organizations representing EPs had attested to the Medicaid incentive criteria (as noted previously, much less stringent);

- 29 percent had attested in 2011,
- 36 percent more were planning to attest in 2012,
- All but three of the remainder were planning to attest in 2013.

Medication reconciliation and providing patients with timely access to electronic health information were the most likely (non-public health) requirements deferred by EPs, but providing summary records at transitions in care and providing reminders for preventive care were also high on the list of requirements being deferred. All will be required in Stage 2. This pattern of deferrals matches those of early attesters reported by CMS (see Table 3). As with hospitals, the main reason for deferring requirements was operational readiness/process challenges, cited by 51% of respondents; 33% reported deferring because of vendor product readiness.

Quality reporting will also be a continuing challenge for EPs though fewer organizations rated capturing needed data from physician documentation electronically as hard — 26% of EPs (vs. 38% of hospital respondents) — or needing moderate changes in processes or capabilities (37%). Twenty-eight percent reported that they were prepared to capture physician documentation electronically. We believe that the difference can be attributed to the presence in most market-leading ambulatory EHRs of a feature that tracks guideline compliance and encourages capture of clarifying information needed for quality measure reporting.² While physician notes were not included in the NPRM, data from physician documentation is required for reporting quality measures.

¹ Metzger, et al. Hospital Quality Reporting: The Hidden Requirements in Meaningful Use, CSC, August 2010. http://www.csc.com/health_services/insights/51442-hospital_quality_reporting_the_hidden_requirements_in_meaningful_use.

² Metzger, et al. Physician Quality Reporting: The Hidden Requirements of Meaningful Use, CSC, January 2011. http://www.csc.com/health_services/insights/58405-physician_quality_reporting_the_hidden_requirements_of_meaningful_use

Capturing laboratory test information was rated as easy by 83% of organizations, moderately challenging by 22%, and hard by only 6%. The data analysis was rated as moderately challenging by about 58% and hard by 18% of the IT executives who responded on behalf of EPs in our survey.

What will be the biggest challenges in achieving meaningful use for Stage 2?

Stage 1 accepts partial implementation of many required capabilities and sets a fairly low bar on how much use qualifies as meaningful use. The data from CMS on all hospitals and EPs that attested to Stage 1 of meaningful use in 2011 reveals that most organizations *exceeded these minimum thresholds* for the requirements they met. For instance, hospitals and EPs used CPOE for medication orders for 85% of patients — even though the Stage 1 threshold was 30% of patients — and the organizations reported capturing over 90% of laboratory results as structured data vs. a threshold of 40%. Clearly, once organizations adopt a capability, they use it for almost all patients — in part because maintaining two separate processes is difficult and could result in safety issues.

In our survey, 57% of respondents thought the likely increase in the threshold for CPOE medication orders from 30% to 60% of patients would not be difficult and only 16% thought it would be hard. The proposed Stage 2 requirement to use CPOE for laboratory orders was also not seen as a major challenge — 63% reported they were prepared, 22% expected moderate changes in processes or systems, and only 13% expected major changes.

However, as shown in Table 4, some proposed requirements will remain a challenge.

Table 4: Challenges in Meeting Stage 2 Requirements

Requirement	Are Prepared	Moderate Process or Product Changes	Major Process or Product Changes
Electronic Medication Administration (eMAR) (inpatient)	86%	10%	3%
Patients view and download their information	12%	57%	29%
Transmitting summary-of-care records at transitions in care	24%	53%	22%

A proposed new core requirement for hospitals in Stage 2 is for electronic medication administration (eMAR) for at least 10% of medication orders. Eighty-six percent of our survey respondents say they are prepared to meet the eMAR requirement, with only 3% saying it will be hard. The challenges with capabilities to engage patients and coordinate care will remain in Stage 2. Only 12% of our survey respondents were prepared to allow patients to view and download their information, and only 24% were prepared to transmit summary-of-care records at transitions in care. As noted earlier, hospitals and EPs report challenges with both vendor products and operational readiness.

Recommendations for Stage 2:

Stage 2 is coming soon and a full year of operational use of capabilities will be required (rather than the 3 months for the first year of Stage 1). Waiting until the final rule is issued to start moving is simply not a good option. Even though the rules are not final, many are unlikely to change — especially the move of most Stage 1 menu options to core. Based on the results from initial organizations that attested to meaningful use and the results of our survey, the challenges are clear. Now is the time for organizations to work in earnest to build capabilities to engage patients and coordinate care. As soon as the quality requirements are final, both hospitals and EPs need to add a focus on capturing and electronically reporting on quality.

Now is the time for organizations to work in earnest to build capabilities to engage patients and coordinate care.

The importance of engaging patients and coordination of care goes beyond meeting the incentives for meaningful use. Patient engagement will be essential to enable patients to share accountability for their care and achieve better health outcomes. Sharing information among providers is the essential requirement for being accountable for care and the health of a population. The requirements for quality reporting are increasing at the same time as more reimbursement is tied to performance. Delivering the best care every day to every patient will require managing quality and quality reporting in real time so that gaps in care can be avoided, rather than merely reported.

Three essential areas where organizations need to start now are:

1. Providing patients with access to their health information electronically through patient portals or directly from EHR systems,
2. Introducing capabilities for physicians to electronically communicate with patients,
3. Exchange of patient information at transitions in care.

Equipping new processes in these areas with the HIT that makes them possible is not just the path to capturing Stage 2 meaningful use payments, but also to “winning” under the new Medicare payment rules and becoming accountable for the care of a population.

The data on numbers of organizations attesting to meaningful use were accessed here: https://www.cms.gov/EHRIncentivePrograms/Downloads/Monthly_Payment_Registration_Report_Updated.pdf

The data on menu items that were deferred and achievement levels for items that were selected are from: Robert Tagalicod, Robert Anthony and Jessica Kahn, Medicare and Medicaid EHR Incentive Programs, presentation to the HIT Policy Committee January 10, 2012.

This paper was updated to reflect the correction of typographical and technical errors in the proposed rule issued by CMS on April 18, 2012 (<https://www.federalregister.gov/articles/2012/04/18/2012-9331/medicare-and-medicaid-programs-electronic-health-record-incentive-program-stage-2-corrections>)

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