Meaningful Use White Paper Series
Paper no. 5a: Measures Reporting for Eligible Providers
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Measures Reporting for Eligible Providers

The fourth paper in this series reviewed the EHR certification requirements related to the notice of proposed rulemaking on meaningful use, published by the Centers for Medicare and Medicaid Services on January 13, 2010. This paper offers an overview of the health IT functionality measures for eligible providers. A companion paper (5b) provides an overview of the requirements for hospitals.

Eligible providers (EPs) participating in the meaningful use program will be required to report on quality measures. The measures defined in the proposed regulation were developed to meet the stated objectives in support of the health outcome policy priorities.

The measures are grouped into two categories: HIT functionality measures and clinical quality measures. This paper focuses on the HIT functionality measures, which were developed to demonstrate the use of certified EHR technology in daily work processes.

Eligibility

Measures in Stage 1 are not set at 100 percent. However, most are set at a relatively high threshold to ensure the intent of the objectives and measures are met (e.g., 80 percent), while recognizing that there are technical hindrances and other barriers that may prevent full compliance. For other objectives and measures that depend on health information exchange, the thresholds remain low, since most areas of the country do not have the infrastructure to support this function.

CMS anticipates raising the threshold in subsequent stages as the capabilities of health IT infrastructure increases. It also anticipates redefining the objectives to go beyond capturing data in electronic format to include the exchange of the data in structured formats. The intent of escalating measures "is to ensure that meaningful use encourages patient-centric, interoperable health information exchange across provider organizations regardless of provider's business affiliation or EHR platform," CMS writes.

In order to meet the meaningful use objectives, EPs must use these EHR capabilities as part of their daily work processes. Further, CMS intends that EPs use the capability for all patients, not just for Medicare or Medicaid populations.

Hospital-based physicians do not qualify for the program. (However, there is an exception if more than 50 percent of a physician's total patient encounters in a six-month period occur in a federally qualified health center or rural health clinic.) If EPs practice at multiple locations, the measures are to be limited to actions taken at locations equipped with certified EHR technology.

A practice is eligible if the certified EHR technology is available at the beginning of the EHR reporting period for a given location. CMS realizes that an EP may not have access to certified EHR technology at

each location. The intent is to include EPs who are able to meaningfully use certified EHR technology when it is available yet also provide care to patients in other locations where it is not available.

To qualify as a meaningful user, 50 percent or more of an EP's patient encounters during the EHR reporting period must occur at a location equipped with certified EHR technology. EPs who do not conduct 50 percent of their patient encounters in any one location would have to meet the 50 percent threshold through a combination of locations. CMS recognizes that this does not ensure control; however, it still advances the priorities and provides some level of equity.

Methods of Demonstration

The NPRM proposes that EPs demonstrate they satisfy each of the objectives by providing an attestation through a secure mechanism, such as claims-based reporting or an online portal (p. 1903). Through a one-time attestation following the completion of the EHR reporting period, they would identify the certified EHR technology used and the results of their performance on all the measures associated with the objectives.

CMS expects to move away from demonstration of meaningful use through attestation reporting in later years. It advocates for uniformity and simplicity in this process and suggests that the Medicaid programs follow its lead. CMS will issue further instructions on the specifics for submitting attestations.

Definitions

The following definitions are helpful in reviewing the objectives, measures, and reporting requirements.

EHR reporting period: the period in which the EP demonstrates meaningful use. In the first payment year (beginning January 1, 2011), this may be any continuous 90-day period. In subsequent years of the program, CMS will require that meaningful use occur throughout the entire year.

Certified EHR technology: "A qualified electronic health record (as defined in section 3000(13) of the PHS Act) that is certified pursuant to section 3001(c)(5) of the PHS Act as meeting standards adopted under section 3004 of the PHS Act that are applicable to the type of record involved (as determined by the Secretary), such as an ambulatory electronic health record for office-based physicians or an inpatient hospital electronic health record for hospitals). In section I.A of this proposed rule, for both Medicare and Medicaid, we discussed incorporating ONC's definition of certified EHR technology."

Certified EHR technology (as defined in the technology standards IFR): "a Complete EHR or a combination of EHR Modules, each of which: (1) Meets the requirements included in the definition of a Qualified EHR; and (2) Has been tested and certified in accordance with the certification program established by the National Coordinator as having met all applicable certification criteria adopted by the Secretary."

Unique patients: a patient may be counted only once during the EHR reporting period, even if seen by the EP multiple times. The meaningful use objective is not necessarily updated every time the patient is seen within the reporting period.

Transition of care: "transfer of a patient from one clinical setting (inpatient, outpatient, physician office, home health, rehab, long-term care facility, etc.) to another or from one EP or eligible hospital (as defined by CCN) to another."

Relevant encounter: "any encounter that the EP or eligible hospital judges performs a medication reconciliation due to new medication or long gaps in time between patient encounters or other reasons determined by the EP or eligible hospital."

Mapping Objectives, Measures, and Reporting

The following table outlines the criteria, measures, and thresholds for both Medicare and Medicaid as currently described in the NPRM. It is expected that there will be considerable comments made during the 60-day public period, and they could result in changes to the program in the final rule.

In reviewing the proposed Stage 1 criteria shown here, EPs may consider how the criteria would be integrated into their practices and how the required measures would be collected and calculated for each EP throughout the organization. EPs that cannot show they met the threshold for meaningful use will not collect the incentives set forth in the NPRM.

Objectives, Measures, EHR Criteria, and Data Reporting Requirements for Eligible Providers

(*sources:* NPRM table 2, IFR table 1, regulation text)

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
Use CPOE	For EPs, CPOE is used for at least 80% of all orders	Enable a user to electronically record, store, retrieve, and manage, at a minimum, the following order types: 1. Medications; 2. Laboratory; 3. Radiology/imaging; and 4. Provider referrals	Orders issued by EP entered using the CPOE functionality	All orders issued by the EP
Implement drug-drug, drug-allergy, drug-formulary checks	The EP has enabled this functionality	1. Automatically and electronically generate and indicate (*e.g.,* pop-up message or sound) in real-time, alerts at the point of care for drug-drug and drug-allergy contraindications based on medication list, medication allergy list, age, and CPOE 2. Enable a user to electronically check if drugs are in a formulary or preferred drug list in accordance with the standard specified in Table 2A row 2 3. Provide certain users	N/A	N/A

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
		with administrator rights to deactivate, modify, and add rules for drug-drug and drug-allergy checking 4. Automatically and electronically track, record, and generate reports on the number of alerts responded to by a user		
Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT	At least 80% of all unique patients seen by the EP have at least one entry or an indication of none recorded as structured data	Enable a user to electronically record, modify, and retrieve a patient's problem list for longitudinal care (*i.e.,* over multiple office visits) in accordance with the applicable standards[%] specified in Table 2A row 1	Number of unique patients seen by an EP that have at least one ICD-9-CM or SNOMED CT® entry or an in indication of "none" recorded as structured data	The total number of unique patients seen by the EP
Generate and transmit permissible prescriptions electronically (eRx)	At least 75% of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology	Enable a user to electronically transmit medication orders (prescriptions) for patients in accordance with the standards specified in Table 2A row 3	Number of prescriptions (other than controlled substances) generated electronically	Number of prescriptions written (other than controlled substances)
Maintain active medication list	At least 80% of all unique patients seen by the EP have at least one entry (or an indication of ''none'' if the patient is not currently prescribed any medication) recorded as structured data	Enable a user to electronically record, modify, and retrieve a patient's active medication list as well as medication history for longitudinal care (*i.e.,* over multiple office visits) in accordance with the applicable standard specified in Table 2A row 1	The number of unique patients seen by the EP have at least one entry or an indication of "none" (if the patient is not prescribed any) recorded as structured data	Number of unique patients seen by the EP
Maintain active medication allergy list	At least 80% of all unique patients seen, by the EP have at least one entry or (an indication of ''none'' if the patient has no medication allergies) recorded as structured data	Enable a user to electronically record, modify, and retrieve a patient's active medication allergy list as well as medication allergy history for longitudinal care (*i.e.,* over multiple office visits)	The number of unique patients seen by the EP have at least one entry (or an indication of "none" if the patient has no medication allergies) recorded as structured data	Number of unique patients seen by the EP
Record demographics: • preferred	At least 80% of all unique patients seen by the EP	Enable a user to electronically record, modify, and retrieve patient	Number of unique patients seen by the EP	Number of unique patients seen by the EP

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
language • insurance type • gender • race • ethnicity • date of birth	have demographics recorded as structured data	demographic data including preferred language, insurance type, gender, race, ethnicity, and date of birth	who have all required demographic elements recorded as structured data	
Record and chart changes in vital signs: • height • weight • blood pressure Calculate and display: • BMI Plot and display growth charts for children 2–20 years, including BMI	For at least 80% of all unique patients age 2 and over seen by the EP record blood pressure and BMI; additionally plot growth chart for children age 2–20	1. Enable a user to electronically record, modify, and retrieve a patient's vital signs including, at a minimum, the height, weight, blood pressure, temperature, and pulse. 2. Automatically calculate and display body mass index (BMI) based on a patient's height and weight 3. Plot and electronically display, upon request, growth charts (height, weight, and BMI) for patients 2–20 years old	Number of unique patients age 2 and over seen by the EP who have a record of their blood pressure and BMI (growth chart for children 2-20) in their record	Number of unique patients age 2 or over seen by the EP
Record smoking status for patients 13 years old or older	At least 80% of all unique patients 13 years old or older seen by the EP have "smoking status'' recorded	Enable a user to electronically record, modify, and retrieve the smoking status of a patient to: current smoker, former smoker, or never smoked	Number of unique patients age 13 or older seen by the EP who have a record of their smoking status	Number of unique patients age 13 or older seen by the EP
Incorporate clinical lab test results in to EHR as structured data	At least 50% of all clinical lab tests ordered by the EP whose results are in a positive/negative or numerical format are incorporated in certified EHR technology as structured data	1. Electronically receive clinical laboratory test results in a structured format and display such results in human readable format 2. Electronically display in human readable format any clinical laboratory tests that have been received with LOINC® codes 3. Electronically display all the information for a test report specified at 42 CFR 493.1291(c)(1) through (7). 4. Enable a user to electronically update a patient's record based upon received laboratory test results	Number of lab tests ordered by the EP whose results are expressed in a positive or negative affirmation or as a number and are incorporated as structured data	The number of lab testes ordered whose results are expressed in a positive or negative affirmation or as a number

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, and outreach	Generate at least one report listing patients of the EP with a specific condition	Enable a user to electronically select, sort, retrieve, and output a list of patients and patients' clinical information, based on user-defined demographic data, medication list, and specific conditions	N/A	N/A
Report ambulatory quality measures to CMS or the States	For 2011, provide aggregate numerator and denominator through attestation as discussed in section II(A)(3) of this proposed rule. For 2012, electronically submit the measures as discussed in section II(A)(3) of this proposed rule	1. Calculate and electronically display quality measure results as specified by CMS or states 2. Enable a user to electronically submit calculated quality measures in accordance with the standard specified in Table 2A row 5		
Send reminders to patients per patient preference for preventive/follow-up care	Reminder sent to at least 50% of all unique patients seen by the EP that are age 50 or over	Electronically generate, upon request, a patient reminder list for preventive or follow-up care according to patient preferences based on demographic data, specific conditions, and/or medication list	Number of unique patients age 50 or over seen by the EP who are provided reminders	Number of unique patients age 50 and over seen by the EP
Implement five clinical decision support rules relevant to specialty or high clinical priority, including for diagnostic test ordering, along with the ability to track compliance with those rules	Implement 5 clinical decision support rules relevant to the clinical quality metrics the EP is responsible for as described further in section II(A)(3). Report through attestation	1. Implement automated, electronic clinical decision support rules (in addition to drug-drug and drug-allergy contraindication checking) according to specialty or clinical priorities that use demographic data, specific patient diagnoses, conditions, diagnostic test results and/or patient medication list 2. Automatically and electronically generate and indicate (*e.g.,* pop-up message or sound) in real-time, alerts and care suggestions based upon clinical decision support rules and evidence grade 3. Automatically and	N/A	N/A

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
		electronically track, record, and generate reports on the number of alerts responded to by a user		
Check insurance eligibility electronically from public and private payers	Insurance eligibility checked electronically for at least 80% of all unique patients seen by the EP	Enable a user to electronically record and display patients' insurance eligibility, and submit insurance eligibility queries to public or private payers and receive an eligibility response in accordance with the applicable standards specified in Table 2A row 4	The number of unique patients seen by the EP whose insurance eligibility is checked electronically	The number of unique patients seen by the EP whose insurer allows for the electronic verification of eligibility
Submit claims electronically to public and private payers	At least 80% of all claims filed electronically by the EP	Enable a user to electronically submit claims to public or private payers in accordance with the applicable standards specified in Table 2A row 4	The number of claims submitted electronically for patients seen by the EP	The number of claims filed by the EP
Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies) upon request	At least 80% of all patients who request an electronic copy of their health information are provided it within 48 hours	Enable a user to create an electronic copy of a patient's clinical information, including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, immunizations, and procedures in: (1) human readable format; and (2) accordance with the standards[%] specified in Table 2A row 1 to provide to a patient on electronic media, or through some other electronic means	Number of patients seen by the EP that request an electronic copy for their health information and received it within 48 hours	The number of patients seen by the EP who request an electronic copy of their health information
Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, allergies)	At least 10% of all unique patients seen by the EP are provided timely electronic access to their health information—within 96 hours of the information being available to the EP	Enable a user to provide patients with online access to their clinical information, including, at a minimum, lab test results, problem list, medication list, medication allergy list, immunizations, and procedures	The number of unique patients seen by the EP who have timely electronic access to their health information (e.g.h have an established user account and password on a patient portal)	The number of patients seen by the EP
Provide clinical summaries for patients for each office visit	Clinical summaries are provided for at least 80% of all office visits	1. Enable a user to provide clinical summaries to patients (in paper or electronic form) for each	The number of unique patients seen in the office who are	The number of unique patients seen in the office

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
		office visit that include, at a minimum, diagnostic test results, medication list, medication allergy list, procedures, problem list, and immunizations 2. If the clinical summary is provided electronically (*i.e.,* not printed), it must be provided in: (1) Human readable format; and (2) accordance with the standards[%] specified in Table 2A row 1 to provide to a patient on electronic media, or through some other electronic means	provided a clinical summary of their visit	
Capability to exchange key clinical information (for example, problem list, medication list, allergies, diagnostic test results) among providers of care and patient authorized entities electronically	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information	1. Electronically receive a patient summary record from other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, immunizations, and procedures and upon receipt of a patient summary record formatted in an alternative standard specified in Table 2A row 1, displaying it in human readable format 2. Enable a user to electronically transmit a patient summary record to other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, immunizations, and procedures in accordance with the standards[%] specified in Table 2A row 1	N/A	N/A
Provide summary care record for each transition of care and referral	Provide summary of care record for at least 80% of transitions of care and referrals	1. Electronically receive a patient summary record, from other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, immunizations, and procedures and upon	The number of transitions of care and referrals for which the EP was transferring or referring provider where a summary of care	The number of transitions of care for which the EP was the transferring or referring provider

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
		receipt of a patient summary record formatted in an alternative standard specified in Table 2A row 1, displaying it in human readable format. 2. Enable a user to electronically transmit a patient summary record to other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, immunizations, and procedures in accordance with the standards[%] specified in Table 2A row 1	record was provided	
Perform medication reconciliation at relevant encounters and each transition of care	Perform medication reconciliation for at least 80% of relevant encounters and transitions of care	Electronically complete medication reconciliation of two or more medication lists (compare and merge) into a single medication list that can be electronically displayed in real-time	The number of relevant encounters and transitions of care for which the EP was a participant where medication reconciliation was performed	The number of relevant encounters and transitions of care for which the EP was a participant
Capability to submit electronic data to immunization registries and actual submission where required and accepted	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries	Electronically record, retrieve, and transmit immunization information to immunization registries in accordance with the standards[%] specified in Table 2A row 8 or in accordance with the applicable state-designated standard format	N/A	N/A
Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies (unless none of the public health agencies to which an EP submits such information have	Electronically record, retrieve, and transmit syndrome-based (*e.g.,* influenza-like illness) public health surveillance information to public health agencies in accordance with the standards specified in Table 2A row 7	N/A	N/A

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
	the capacity to receive the information electronically)			
Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Conduct or review a security risk analysis per 45 CFR 164.308(a)(1) and implement security updates as necessary	1. Assign a unique name and/or number for identifying and tracking user identity and establish controls that permit only authorized users to access electronic health information 2. Permit authorized users (who are authorized for emergency situations) to access electronic health information during an emergency 3. Terminate an electronic session after a predetermined time of inactivity 4. Encrypt and decrypt electronic health information according to user-defined preferences (*e.g.,* backups, removable media, at log-on/off) in accordance with the standard specified in Table 2B row 1 5. Encrypt and decrypt electronic health information when exchanged in accordance with the standard specified in Table 2B row 2 6. Record actions (*e.g.,* deletion) related to electronic health information in accordance with the standard specified in Table 2B row 3 (*i.e.,* audit log), provide alerts based on user-defined events, and electronically display and print all or a specified set of recorded information upon request or at a set period of time 7. Verify that electronic health information has not been altered in transit and detect the alteration and	N/A	N/A

Objective	Measure	EHR Certification Criteria	Data Reporting	
			Numerator	Denominator
		deletion of electronic health information and audit logs in accordance with the standard specified in Table 2B row 4 8. Verify that a person or entity seeking access to electronic health information is the one claimed and is authorized to access such information 9. Verify that a person or entity seeking access to electronic health information across a network is the one claimed and is authorized to access such information in accordance with the standard specified in Table 2B row 5 10. Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in Table 2B row 6		

[%] Instances where the version of an adopted standard (specified in the regulation text) will be "at a minimum" the version to which a Complete EHR or EHR Module must be tested and certified in order to be considered compliant with the adopted standard.

References

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