American Hospital Association

Regulatory Advisory

August 13, 2010

CMS Final Rule on Meaningful Use of EHRs

At a Glance

The Issue:

The Centers for Medicare & Medicaid Services (CMS) on July 28 published a final rule defining "meaningful use" of electronic health records (EHRs). At the same time, the Office of the National Coordinator (ONC) for Health Information Technology issued a final rule that sets certification criteria, standards and implementation specifications for EHR technology. Taken together, these regulations set EHR adoption requirements that hospitals and physicians must meet under the *American Recovery and Reinvestment Act of 2009* (ARRA) to qualify for additional Medicare and Medicaid incentive payments beginning in 2011 and to avoid significant payment penalties in 2015 and later years.

This advisory addresses CMS' final rule on EHR incentives and meaningful use. A second advisory on ONC's certification rule will be sent separately. CMS' final rule can be viewed at http://edocket.access.gpo.gov/2010/pdf/2010-17207.pdf; it takes effect on September 27. The certification final rule, which will take effect August 27, can be viewed at http://edocket.access.gpo.gov/2010/pdf/2010-17210.pdf.

Our Take:

CMS made some important improvements in the final rule. However, the AHA remains concerned that the requirements may be out of reach for many of America's hospitals. CMS provided some flexibility in the requirements for demonstrating meaningful use, but a hospital will still need to meet a total of 19 objectives. Hospitals will need to use a *certified* EHR to meet 14 "core," or mandatory, objectives and an additional five objectives chosen from a "menu set" of 10 options.

Computerized provider order entry (CPOE) for medications is required to be a meaningful user, as is reporting on 15 clinical quality measures generated using a certified EHR. The definition of meaningful use does not, however, include electronic billing or insurance eligibility verification in Stage 1.

The final rule establishes a single set of meaningful use criteria for hospitals large and small, rural and urban. It does not address concerns raised by the AHA and others that this approach could lead to a "digital divide" in the adoption and use of EHRs between large, urban hospitals and smaller, rural facilities.

In an important change from the proposed rule, CAHs are now also eligible for the Medicaid incentives. This change will allow CAHs (and all hospitals eligible for Medicaid incentives) to access important up-front funds for the adoption, implementation or upgrade of EHRs in the first year that the state Medicaid programs are operational if they meet the ten percent Medicaid patient volume requirement. Unfortunately, individual hospitals in multi-campus settings will not be eligible for incentives payments if they share a single Medicare provider number.

(*Cont.*)

CMS' final rule implements provisions of the AHA-supported *Continuing Extensions Act of 2010*, which made physicians providing ambulatory services in hospital-based clinics and outpatient departments eligible for the incentive payments (and subject to Medicare penalties). However, hospital-based physicians providing 90 percent or more of their services in either the inpatient or emergency room setting are still considered hospital-based and are therefore not eligible for the incentive payments.

Only hospitals using EHRs certified under a new federal certification process will qualify. The AHA had recommended that the federal government temporarily "grandfather" currently installed EHRs. ONC rejected that idea, however, in an earlier rule (see the AHA's *Regulatory Advisory* on the Temporary Certification Process at http://www.aha.org/aha/advisory/2010/100720-regulatory-adv.pdf). Many vendors have indicated they will seek certification only for their latest version. Therefore, before they can apply for the incentives, all hospitals and physicians will need to either upgrade to or install new certified EHRs, or undertake a self-developed certification of their installed system at their own expense. No certified products are yet available.

CMS has delayed the operation of the incentive programs until January 2011. The Medicare hospital incentive will still operate on the federal fiscal year (October 1 to September 30), while the physician programs run on a calendar year.

The AHA has worked with members of Congress to introduce legislation to remedy the multi-campus issue and to introduce "grandfathering" for currently installed EHRs that support hospitals and physicians in meeting the meaningful use requirements but lack the new certification. We also will work to ease the burden of adoption of EHRs by small and rural hospitals.

What You Can Do:

- ✓ Share this advisory with your senior management team.
- ✓ Ask your chief information officer to examine how this final rule will affect your plans to implement EHRs and achieve meaningful use.
- ✓ If you have not already done so, discuss with your EHR vendors the products and versions they intend to certify. Ask specific questions about their timeline for certification and your place in their queue for installations and upgrades.
- ✓ Make sure your quality staff is aware of the new quality reporting requirements for meaningful use.
- ✓ Consult the AHA's *Regulatory Advisory* on ONC's final rule for the certification process published by ONC and an upcoming advisory on the final rule on certification criteria and standards.
- ✓ Download additional AHA educational materials, including PowerPoint slides and recorded member education calls on individual topics in meaningful use (www.aha.org/hitcalls) and the recent *Hospitals in Pursuit of Excellence Leadership Guide to EHR Implementation* (www.hpoe.org/compendium/index.shtml). Additional resources will be posted to www.aha.org.

Questions:

If you have questions or need more information, please contact Chantal Worzala, director of policy, at cworzala@aha.org or (202) 626-2313.

AHA's Regulatory Advisories are produced whenever there are significant regulatory developments that affect the job you do in your community. A 35-page, in-depth examination of this issue follows.

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BACKGROUND

The American Recovery and Reinvestment Act of 2009 (ARRA) authorized incentive programs under Medicare and Medicaid that will pay bonuses to "meaningful users" of certified electronic health records (EHRs) beginning in fiscal year (FY) 2011, then phase-in penalties for those failing to meet "meaningful use" beginning in FY 2015. To be eligible for the incentives, hospitals and physicians must use EHRs that have been certified through a new federal certification process established by the Office of the National Coordinator for Health Information Technology (ONC).

Three regulations will govern the incentive programs:

- A "meaningful use" rule from the Centers for Medicare & Medicaid Services (CMS) that sets out the requirements for providers;
- A rule from ONC on the certification criteria and standards that must be met by vendor products and EHR systems that hospitals and physicians self-develop; and
- A certification process rule from ONC that establishes new certifying bodies for EHRs.

This advisory summarizes key elements of the final rule from CMS establishing the Medicare and Medicaid EHR Incentive Programs, including:

- the overall framework;
- the definition and requirements for demonstrating meaningful use;
- quality reporting requirements;
- certification requirements;
- eligibility and payment policies for hospitals under Medicare and Medicaid;
- eligibility and payment policies for physicians and other eligible professionals under Medicare and Medicaid; and
- CMS operations.

This advisory does not include information on incentive payments for qualifying Medicare Advantage Organizations.

The rule, which is available at http://edocket.access.gpo.gov/2010/pdf/2010-17207.pdf, was published in the *Federal Register* on July 28 and takes effect September 27. ONC published its final rule on standards and certification criteria the same day; it is available at http://edocket.access.gpo.gov/2010/pdf/2010-17210.pdf. The final rule establishing the certification process appeared in the *Federal Register* on July 24; the AHA's advisory on the certification process rule is available at http://www.aha.org/aha/advisory/2010/100720-regulatory-adv.pdf. A separate *Regulatory Advisory* on the certification criteria and standards is forthcoming.

AS IT STANDS

Overall Framework

The ARRA set forward three requirements for hospitals and physicians to qualify for the EHR incentive programs:

- Use of certified EHR technology;
- Demonstration of meaningful use of the EHR; and
- Clinical quality reporting using the EHR.

CMS' final rule sets out the specific requirements to meet the ARRA provisions, including a specific definition of and reporting requirements to demonstrate meaningful use of certified EHR technology.

CMS finalized an approach to meaningful use that becomes more stringent over time, but provided detailed objectives for only Stage 1, covering 2011 and 2012. In the proposed rule, CMS discussed an "adoption year approach," whereby the Stage 1 criteria would apply to all hospitals in their first year of meaningful use incentive payments, as long as they become eligible before 2015. CMS **did not finalize** that proposal, but did indicate that hospitals first qualifying in later years could meet the Stage 1 objectives. By law, hospitals can first qualify as meaningful users in FY 2013 and still receive the full four years of incentive payments. Starting after FY 2013 results in smaller total incentive payments. For those starting later, however, CMS noted that "future rulemaking might also include updates to the Stage 1 criteria."

While CMS did not finalize its proposed transition, the rule includes discussion of likely directions for Stage 2. In particular, CMS notes that:

- Stage 2 will likely include all of the Stage 1 requirements, with greater levels of compliance, increased use of structured data, and more information exchange;
- Optional, or "menu set" objectives for Stage 1 will likely become "core," required, objectives in Stage 2;
- Computerized provider order entry (CPOE) will be required for 60 percent of patients in Stage 2 (finalized provision); and
- CMS is interested in including electronic claims submission and insurance eligibility verification in Stage 2.

In the preamble to the rule, CMS notes that it intends to evaluate experience in the first years of the programs before undertaking further rulemaking for future years. The agency also states its intention to update the criteria of meaningful use to Stage 2 in time for the 2013 payment year, but adds that "[f]or this final rule, Stage 1 criteria for meaningful use are valid for all payment years until updated by future rulemaking."

The AHA recommended that CMS provide a strategic roadmap by establishing a full definition of meaningful use for 2017, and adopting a phased-in approach between 2011 and 2017. We are troubled that hospitals and physicians have not been given the long-term guidance they need to plan their EHR implementation strategies. Changes this

significant require multi-year implementation and CMS' decision not to articulate its system performance expectations impairs the ability to implement such systems in a manner designed to protect patient safety and promote more efficient and effective care.

Definition of Meaningful Use

The meaningful use definition requires hospitals adopt and meaningfully use certified EHRs to meet 14 "core," or mandatory, objectives and an additional five objectives chosen from a "menu set" of 10 options, of which at least one must address public health objectives. The finalized requirements draw from those in the proposed rule. In response to comments, including those from the AHA, many of the objectives were narrowed in scope and clarified. In the final rule, CMS:

- Excluded electronic claims submission and insurance eligibility verification from the meaningful use objectives for Stage 1.
- Revised the CPOE measure to focus only on medication orders, rather than "all orders" (as proposed), and changed the measure to using CPOE to order at least one medication for more than 30 percent of patients admitted to the inpatient or emergency department.
- Accepted the recommendation of the AHA and others to separate clinical drug alerts (drug-drug and drug-allergy interactions) from efficiency-oriented drug alerts (drug-formulary checks).
- Dropped the number of required clinical decision support tools from five to one.
- Added two objectives for hospitals that had been recommended by the HIT Policy Committee: providing patient-specific educational resources and recording advanced directives.

The "core," or mandatory, objectives for 2011 and 2012 are:

- Use CPOE for medications for more than 30 percent of patients.
- Implement drug-drug and drug-allergy interaction checks.
- Record demographics (race/ethnicity, gender, date of birth, preferred language, date and preliminary cause of death in the event of mortality).
- Maintain up-to-date problem list.
- Maintain active medication list.
- Maintain active medication allergy list.
- Record and chart changes in vital signs (height, weight and blood pressure).
- Record smoking status (patients age 13 and older).
- Implement one clinical decision support rule.
- Report 15 hospital clinical quality measures to CMS.
- Provide patients with an electronic copy of their health information upon request.
- Provide patients with an electronic copy of their discharge instructions upon request.
- Have the capability to exchange key clinical information among providers of care and patient-authorized entities electronically.
- Protect electronic health information through appropriate technical capabilities.

Table 1 details both the "core" and "menu set" of meaningful use objectives and measures for hospitals.

Health IT Functionality Measures

Each meaningful use objective has associated functionality measures to ensure that objectives are met (see Table 1). In many cases, CMS has reduced the threshold of compliance for the meaningful use measures. For instance, the threshold for recording demographics was reduced from 80 percent of patients to 50 percent. In addition, in response to comments from the hospital field, CMS has modified all measures that would require *manual* calculation, and ONC has included automated generation of measures requiring a percentage calculation in the certification criteria for EHRs.

Most measures are now specified to include both inpatient and emergency departments (EDs) (Place of Service (POS) 21 or 23). Therefore, hospitals must assess their EHR needs (including the certification requirement) for both the inpatient and ED settings.

In addition, most measures use unique patients, not encounters in the denominator. Thus, patients admitted multiple times to the inpatient setting or ED would count only once. CMS' rationale for this approach is that many aspects of the medical record "will not need to be updated or even be needed by the provider at every patient encounter." In addition, EHRs generally organize data by patient, not by encounter.

Overall, the measures require that at least 80 percent of all patients seen in the inpatient setting or emergency department have an EHR (up to 20 percent may still be on paper). The following measures require hospitals to provide the denominator of all unique patients seen during the reporting period (adding together those in the EHR and those with paper records):

- Record demographics (core).
- Maintain up-to-date problem list (core).
- Maintain active medication list (core).
- Maintain active medication allergy list (core).
- Identify patient-specific education resources (menu set).

All other measures with a percentage calculation use the patients with records in the EHR for the denominator; vendor products are required to calculate them directly from the EHR for certification.

The health IT functionality measures also include two types of "yes/no" measures:

- An attestation that the hospital has enabled a specific function (such as drug-drug and drug-allergy alerts); or
- An attestation that the hospital has performed a test of an EHR capability (such as testing the certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies).

For those measures that require testing the capability to exchange information with another entity, such as a public health agency, CMS specifies that the test may involve the exchange of information about a fictional patient, that a failed attempt at such information exchange would meet the measure, that only one test is required for physicians and other eligible professionals (EPs) practicing in a group setting who share the same certified EHR technology, and that a yes/no attestation would be sufficient to verify that the requirements of such measures have been met. Note, too, that if a test with an entity is successful, CMS now believes that the relevant EP, eligible hospital or CAH "should institute regular reporting to that entity in accordance with applicable law and practice."

CMS has required use of certified EHR technology to achieve the objectives, including use of any standards that have been adopted by the Secretary of Health and Human Services (HHS) that are specified in the related certification criteria final rule from ONC. The standards will be discussed in detail in our regulatory advisory on the ONC rule; some examples follow:

- Structured problem lists incorporate ICD-9-CM or SNOMED-CT as standards for diagnoses.
- Race and ethnicity data incorporate the OMB Race and Ethnicity Categories listed in OMB Directive Number 15 (these categories are explained in the AHA/HRET Disparities Toolkit available at www.hretdisparities.org).
- Smoking status incorporates as structured values: current every day smoker, current some-day smoker, former smoker, never smoker, smoker with current status unknown, and unknown if ever smoked.
- Providing patients with a copy of their electronic health information incorporates a number of specific standards for how the data are coded (vocabulary standards) and structured for exchange (content exchange standards). While data do not need to be collected using these standards, they must be in these formats for exchange. This will require significant mapping of the data to these standards.

CMS did clarify in the rule that the coding of problem lists could be done after a physician has entered his or her findings by individuals other than the diagnosing provider.

In some areas, CMS has not identified a standard, but still requires the use of structured data, rather than free text, in the EHR. For example, demographic variables other than race and ethnicity must be structured, but have no defined standards. CMS notes in the rule that:

> Structured data is not fully dependent on an established standard. Established standards facilitate the exchange of the information across providers by ensuring data is structured in the same way. However, structured data within certified EHR technology merely requires the system to be able to identify the data as providing specific information. This is commonly accomplished by creating fixed fields within a record or file, but not solely accomplished in this manner.

Table 1: Stage 1 Objectives and Measures for Eligible Hospitals and Critical Access Hospitals

OBJECTIVES		MEASURES
Core Set: *Hospitals must achieve all of the following objectives and meet the required threshold. POS = Place of Service code.*		
C1	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 30% of unique patients with at least one medication in their medication list admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one medication order entered using CPOE
C2	Implement drug-drug and drug-allergy interaction checks	The eligible hospital/CAH has enabled this functionality for the entire EHR reporting period
C3	Record demographics: • Preferred language • Gender • Race • Ethnicity • Date of birth • Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 50% of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data
C4	Maintain an up-to-date problem list of current and active diagnoses	More than 80% of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data
C5	Maintain active medication list	More than 80% of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data
C6	Maintain active medication allergy list	More than 80% of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data

OBJECTIVES		MEASURES
C7	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 more than 50% of all unique patients age 2 and over admitted to eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight and blood pressure are recorded as structured data
C8	Record smoking status for patients 13 years old or older	More than 50% of all unique patients 13 years old or older admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have smoking status recorded as structured data
C9	Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule	Implement one clinical decision support rule
C10	Report hospital clinical quality measures to CMS or the States	For 2011, provide aggregate numerator, denominator, and exclusions through attestation as discussed in section II(A)(3) of [the] final rule
		For 2012, electronically submit the clinical quality measures as discussed in section II(A)(3) of [the] final rule
C11	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request	More than 50% of all patients of the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within three business days
C12	Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request	More than 50% of all patients who are discharged from an eligible hospital or CAH's inpatient department or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it
C13	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication 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

OBJECTIVES		MEASURES
C14	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) [under the HIPAA Security Rule] and implement security updates as necessary and correct identified security deficiencies as part of its risk management process
Menu Set: *Hospitals must achieve five of the following objectives and meet the required threshold to include at least one public health reporting measure (M8,M9, M10)*		
M1	Implement drug-formulary checks	The eligible hospital/CAH has enabled this functionality and has access to at least one internal or external drug formulary for the entire EHR reporting period
M2	Record advance directives for patients 65 years old or older	More than 50% of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) have an indication of an advance directive status recorded
M3	Incorporate clinical lab-test results into certified EHR technology as structured data	More than 40% of all clinical lab tests results ordered by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data
M4	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the eligible hospital or CAH with a specific condition
M5	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	More than 10% of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources
M6	The eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The eligible hospital or CAH performs medication reconciliation for more than 50% of transitions of care in which the patient is admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)

OBJECTIVES		MEASURES
M7	The eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The eligible hospital or CAH who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50% of transitions of care and referrals
M8	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the eligible hospital or CAH submits such information have the capacity to receive the information electronically)
M9	Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which the eligible hospital or CAH submits such information have the capacity to receive the information electronically)
M10	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with 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 and follow-up submission if the test is successful (unless none of the public health agencies to which an eligible hospital or CAH submits such information have the capacity to receive the information electronically)

Exclusions. CMS has modified some measures to permit an eligible hospital or CAH to indicate that the objective/measure does not apply to them because, for example, they have no patients or an insufficient number of actions to calculate the measure, and the agency has identified specific exclusions where they exist. CMS will only require attestation to remove the measure from consideration, which reduces the number of objectives required to demonstrate meaningful use. For hospitals and CAHs, the following objectives have specific exclusion criteria:

- Record smoking status (patients 13 and older).
- Provide patients with an electronic copy of their health information upon request.

- Provide patients with an electronic copy of their discharge instructions upon request.
- Record advanced directives.
- Submit data to immunization registries.
- Submit lab results to public health.
- Submit syndromic surveillance data to public health.

Privacy and Security. In the final rule, CMS reiterates its position that "[w]e do not see meaningful use as an appropriate regulatory tool to impose different, additional, and/or inconsistent privacy and security policy requirements from those policies already required by HIPAA." The AHA commented favorably on CMS' policy position in the proposed rule and appreciates that the agency reached the same conclusion in adopting the final rule.

But the agency retains in the final rule an explicit objective to "protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities" because the agency feels that "it is crucial that EPs, eligible hospitals, and CAHs evaluate the impact certified EHR technology has on their compliance with HIPAA and the protection of health information in general."

Notably, while CMS finalizes only one objective specific to privacy and security, ONC looks to CMS' stated objective to adopt in its own final rule multiple privacy and security-related criteria for the certification of EHR technology. More detail about ONC's multiple privacy and security-related certification criteria will be provided in a separate AHA *Regulatory Advisory*.

CMS' final regulation also includes a related measure for the final privacy and security objective, which is to conduct or review a security risk analysis (as required by the current HIPAA security rule), implement security updates and correct identified security deficiencies. The AHA suggested in commenting on CMS' proposed inclusion of an almost identical measure in the meaningful use regulation that such a measure is unnecessary for the meaningful use rule given hospitals' existing obligations under the security rule to periodically review and update security policies, procedures and practices and the enforcement mechanisms available to OCR to ensure compliance with the existing security rule obligations. The AHA instead urged that CMS adopt in the final rule, if it concluded any measure related to its privacy and security objective was absolutely necessary, a more appropriate and directly related one that would recognize the critical importance and thorough nature of the certification criteria developed by ONC: "The adoption and use of certified EHR technology that meets ONC's criteria related to privacy and security capabilities."

Nevertheless, CMS retains the measure largely unaltered from the proposed rule. CMS also specifically adopts, unaltered in the final rule preamble, its previous proposed rule discussion about the precise requirements to meet the privacy and security-related measure. The preamble states:

> While certified EHR technology provides tools for protecting health information, it is not a full protection solution. Processes and possibly tools outside the scope of certified EHR technology are required. Therefore, for the Stage 1 criteria of meaningful use we propose that EPs and eligible hospitals conduct or review a security risk analysis of certified EHR technology and implement updates as necessary at least once prior to the end of the EHR reporting period and attest to that conduct or review. The testing could occur prior to the beginning of the EHR reporting period. This is to ensure that the certified EHR technology is playing its role in the overall strategy of the EP or eligible hospital in protecting health information.

CMS' slight edit to the measure adopted in the final rule (*i.e.*, adding at the end the phrase "as part of its risk management process") is explained in the preamble as a response to a request in proposed rule comments for clarification about "implementing security updates" as the measure requires:

> A security update would be required if any security deficiencies were identified during the risk analysis. A security update could be updated software for certified EHR technology to be implemented as soon as available, or changes in workflow processes, or storage methods or any other necessary corrective action that needs to take place in order to eliminate the security deficiency or deficiencies identified in the risk analysis.

Reporting Period

For the first payment year under Medicare, CMS will require a shortened reporting period of any continuous 90-day period that falls within the fiscal year. This allows hospitals additional time to implement certified EHR systems and develop the capacity to meet the proposed objectives and calculate the proposed measures. The 90-day reporting period will apply for the first year a hospital attests to being a meaningful user under Medicare. For hospitals and CAHs that want to qualify for incentive payments in fiscal year 2011, they must begin meaningful use of certified EHR technology on or before July 2, 2011. In subsequent years, CMS proposes using a full-year reporting period based on the federal fiscal year.

Under the first year of Medicaid payments for adopting, implementing or upgrading, there is no specified reporting period. As soon as hospitals and EPs successfully meet state requirements for demonstrating that they are implementing, upgrading or adopting certified EHR technology they will be eligible for payment. The payment year following the first Medicaid payment year for adopting, implementing or upgrading will also have a 90-day reporting period. Later payment years will require full-year reporting.

Reporting Clinical Quality Measures

The ARRA requires that hospitals and EPs submit to the HHS Secretary information on clinical quality measures, as determined by the Secretary. The list of quality measures

that CMS proposed included both measures that are undergoing re-specification for data collection through EHRs and measures that have not been re-specified for EHR data collection. However, in the final rule, CMS finalized for Stage 1 only those measures that have been re-specified for EHR collection. These 15 measures focus on stroke care, prevention and treatment of blood clots (venous thromboembolisms), and ED throughput (see Table 2). The technical specifications are available at http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage.

All of the measures have been endorsed by the National Quality Forum and adopted by the Hospital Quality Alliance; however, none of the measures are used for the Medicare pay-for-reporting program nor proposed by CMS to be implemented in the coming year (the ED throughput measures have been proposed by CMS for implementation in the Medicare pay-for-reporting program beginning in FY 2014). The AHA is disappointed that CMS has chosen not to initially align the quality measures selected for the EHR incentives program with those measures already reported for the Medicare pay-for-reporting program, and we will continue to work with CMS to harmonize these programs as soon as possible. Hospitals must continue to comply with the Medicare pay-for-reporting program to receive a full update.

Quality Reporting for FY 2011. Hospitals will be required to report on all quality measures for which they have any applicable patients of any payer, not just for measures applicable to their Medicare patients. This requirement is different than for the pay-for-reporting program, for which hospitals need only report on quality measures for which they have at least five eligible patients in a given calendar quarter. The timeframe for reporting clinical quality measures for the first payment year matches the reporting timeframe specified for the other meaningful use requirements in that hospitals are expected to report on any continuous 90-day period that falls within the fiscal year.

Because much work still needs to be done to make clinical quality measure data flow between hospitals and CMS, for the FY 2011 incentives, CMS will require hospitals to attest that they have used certified EHR technology to capture and calculate the clinical quality measures. CMS will require hospitals to submit summary information on their quality measures calculations as it is displayed by their certified EHR technology to demonstrate their compliance with the meaningful use criteria.

Specifically, for FY 2011, CMS will require hospitals to demonstrate meaningful use of certified EHR technology for clinical quality reporting purposes by:

- Attesting that they are using certified EHR technology to capture the data elements and calculate the results for the adopted clinical quality measures;
- Reporting the results of their measure calculations as they are displayed by their certified EHR technology to CMS by submitting information on the measure numerators and denominators, and information on any patient exclusions, for all patients eligible for any of the adopted quality measures; and
- Reporting the beginning and ending dates of the hospital's selected reporting period.

In the final rule, CMS clarifies that the clinical quality measures adopted for the Medicare EHR incentive program also will apply to the Medicaid EHR incentive program. Therefore, hospitals participating in the Medicaid incentive program are required to report on the 15 measures finalized in this rule. If the hospital has zero patients that are included in a measure's population, the hospital would report zero as its denominator in the summary data.

Clinical Quality Measures Reporting for FY 2012 and Beyond. For FY 2012, an eligible hospital will be required to submit summary information on clinical quality measures using certified EHR technology in order to be considered a meaningful EHR user. CMS states that hospitals will be able to submit the summary information generated by their EHR – the information on hospitals' measure numerators, denominators and excluded patient populations – by submitting their data based on specified structures, such as Clinical Data Architecture, and accompanying templates produced as EHR output through a CMS-designed portal. CMS will post the technical requirements for submission of hospital quality measures on its website by April 1, 2011. If feasible by 2012, CMS will offer as an alternative to submitting data through a CMS portal the option of submitting information through a Health Information Exchange/Health Information Organization with which the hospital participates or through a registry that has the capacity to receive information from certified EHRs. Hospitals participating in the Medicaid incentive program would submit their data directly to their state; CMS expects states to be able to accept the data electronically by their second year of implementing the EHR incentive program.

For hospitals' second payment year, they will be expected to report on the clinical quality measures for the 12-month time period. However, in the final rule, CMS did not specify when or how often hospitals will need to submit their data and provided no other details about the submission process.

Table 2. List of Stage 1 Meaningful Use Clinical Quality Measures

Condition	Measure Name
Emergency Department Throughput	Median time from ED arrival to ED departure for admitted patients
	Admission decision time to ED departure time for admitted patients
Stroke	Discharge on anti-thrombotics
	Anticoagulation for A-fib/flutter
	Thrombolytic therapy for patients arriving within 2 hours of symptom onset
	Anti-thrombotic therapy by day 2
	Discharge on statins
	Stroke education
	Rehabilitation assessment

Venous Thromboembolism (VTE)	VTE prophylaxis within 24 hours of arrival
	ICU VTE prophylaxis
	Anticoagulation overlap therapy
	Platelet monitoring on unfractionated heparin
	VTE discharge instructions
	Incidence of potentially preventable VTE

Certification Requirements

To qualify for the EHR incentive payments, hospitals and eligible professionals (EPs) must attest to CMS that they have installed an EHR certified through a new federal certification process. Note that ONC is in the midst of setting up this process and **no certified products are currently available**. ONC has stated that it believes the first certifications for meaningful use may be available before the end of 2011.

In a separate final rule, ONC finalized a definition of certified EHRs and an initial set of certification criteria, standards and implementation specifications for EHRs. CMS uses ONC's multi-stage definition of "certified EHR technology." In essence, providers must use either a "complete EHR," which has been developed to meet all of the applicable certification criteria adopted by the HHS Secretary, or a combination of EHR modules, which can be "any service, component or combination thereof that can meet the requirements of at least one" of the certification criteria adopted by the Secretary. The system used by providers must meet the statutory definition of a qualified EHR and be "tested and certified in accordance with the certification program established by the National Coordinator." Providers who choose to combine multiple EHR modules are responsible for ensuring that the modules work together and that, together, they meet all of the certification criteria. ONC, however, will provide a comprehensive list of all certified EHR technology on its website.

The certification criteria follow the Stage 1 meaningful use objectives laid out by CMS and also outline specific functions needed to protect the privacy and security of health information. ONC included certification criteria related to the calculation and submission of all of the clinical quality measures specified by CMS for eligible hospitals and CAHs. Although AHA and others urged ONC to include in the certification criteria that EHRs must show they can **accurately** calculate the quality measures, ONC stated in the final rule that it did not believe this was necessary. The certification criteria apply to EHR products, not providers. As recommended by the AHA, ONC clarifies in the rule that the certification criteria include automated measure calculation for each meaningful use objective with a percentage-based measure. This will dramatically lower the burden of reporting the meaningful use measures by providers and eliminate manual calculations.

Alignment between Medicare and Medicaid

States will run the Medicaid EHR incentive programs, which are optional. Each state is responsible for establishing the timeline for its Medicaid EHR incentive program. CMS

notes in a fact sheet that "states will be initiating their incentive programs on a rolling basis, subject to CMS approval of the State Medicaid HIT plan."

CMS finalized its proposal that states use the Medicare definition of meaningful use as a floor, with the ability to petition CMS for approval of state-specific modifications. For Stage 1, CMS will only allow states to tailor the definition as it pertains specifically to public heath objectives and data registries. For example, states could specify standards-based means of transmission and/or destination of data for electronic submission of reportable lab results or syndromic surveillance data, but CMS will not approve any request that would require functionality beyond what is included in the ONC EHR certification criteria for Stage 1. CMS indicates that for Stage 2, it may consider states' requests to tailor meaningful use pertaining to health information exchange.

However, CMS also finalized its proposal that hospitals that qualify as meaningful users for Medicare will be "deemed" as meaningful users for Medicaid. CMS further clarified that those "deemed" hospitals "need not meet additional criteria imposed by the States." Therefore, hospitals that meet meaningful use criteria for Medicare will not have to meet state-specific criteria under Medicaid.

As required by the ARRA and discussed further below, in the first payment year, eligible Medicaid providers can qualify for the incentive payment by adopting, implementing or upgrading to certified EHR technology. They will not need to attest to meaningful use of EHRs. Hospitals that meet all of the relevant criteria, including Medicaid patient volume thresholds, can receive both the Medicare and Medicaid incentive payments.

Eligibility for Medicare FFS Incentive Payments: Hospitals and CAHs

Eligible Hospitals. Subsection (d) (PPS hospitals) and CAHs are subject to the EHR incentive program incentive payments and penalties. A hospital will be identified by its Medicare provider number. Multiple hospital campuses sharing one provider number will not be identified separately for purposes of this program.

The ARRA defines an eligible hospital as a subsection (d) hospital. CMS states that subsection (d) hospitals are PPS hospitals located in one of the 50 states or the District of Columbia. Hospitals located in the territories, including Puerto Rico, are neither eligible for incentive payments nor subject to penalties. However, hospitals in Maryland are eligible for incentive payments, as that state operates under a waiver from the inpatient PPS. Psychiatric, rehabilitation, long-term care, children's[1] and cancer[1] hospitals are not eligible for Medicare incentive payments or subject to penalties because they are specifically excluded from the inpatient PPS.

CMS finalized its proposal to provide incentive payments to hospitals as distinguished by provider number on the cost report. Therefore, incentive payments for eligible hospitals would be calculated based on the provider number used for cost reporting purposes, which is the CMS Certification Number (CCN) of the main provider. *This*

[1] Children's and cancer hospitals are eligible to receive Medicaid EHR incentives as described on page 21.

means that hospitals that have multiple sites under one CCN will receive only one incentive payment. The AHA is very concerned about this approach and will pursue legislation to prevent hospital systems that have only one CCN from being disadvantaged or penalized in the calculation of the incentive payments relative to hospital systems with multiple CCNs.

CAHs. Under the ARRA, CAHs also are eligible for Medicare incentive payments. CMS proposes to provide incentive payments to CAHs as distinguished by provider number on the cost report. Therefore, incentive payments for eligible CAHs would be calculated based on the provider number used for cost-reporting purposes, which is the CCN of the main provider. CAHs will be expected to meet the same definition of a meaningful EHR user as other hospitals, including quality reporting requirements. CMS finalized its proposal to calculate the incentive payments for qualifying CAHs based on the product of "the reasonable costs incurred for the purchase of depreciable assets like computers and associated hardware and software necessary to administer certified EHR technology, excluding any depreciation and interest expenses" and the CAH's Medicare share. Reasonable costs incurred in earlier cost reporting periods that have not been fully depreciated also will be included. Payments to CAHs will be processed as interim payments subject to reconciliation.

Payment Methods for Medicare FFS Incentive Payments: Hospitals

Under the ARRA, hospitals deemed meaningful users in FYs 2011 through 2015 can receive Medicare incentive payments for up to four consecutive years. However, payments may not be made after FY 2016. Incentive payments are calculated as Medicare's share of the sum of $2 million, plus an additional discharge-related amount. A hospital receives $200 for each discharge for discharges starting with its 1,150th and continuing through its 23,000th. CMS will obtain a hospital's number of discharges from the revised cost report (Form 2552-10), Worksheet E-1, Part II, line 1, which is the sum of Worksheet S-3, Part I, column 15, lines 14, 16, and 17. The revised cost report is effective for cost-reporting periods beginning May 1, 2010 and after.

While meaningful use determination is made based on the "payment year," which coincides with the federal fiscal year, the ARRA gives CMS the authority to determine the appropriate period to use in calculating the discharge-related amount. Therefore, to determine a hospital's discharge-related amount, CMS finalized its proposal to use the hospital's cost reporting period. CMS will estimate the initial amount based on cost report data on hospital discharges from the hospital's most recently filed 12-month cost report. For example, for hospitals with October-to-September cost-reporting periods, if the hospital qualifies for incentive payments on January 1, 2011, this would most likely be their October 1, 2008 through September 30, 2009 cost report. The final discharge-related amount would be determined and settled based on the hospital's cost report beginning in the payment year. For example, FY 2011 is October 1, 2010 through September 30, 2011. For hospitals with October-to-September cost-reporting periods, CMS will determine and settle the final discharge-related amount using the hospital's October 1, 2010 through September 30, 2011 cost report.

The statutory formula for calculating a hospital's Medicare share consists of total Medicare Part A and C inpatient days, divided by the product of total inpatient days and hospital charges excluding charity care divided by total charges:

$$\frac{\text{Medicare inpatient days}}{\text{(total inpatient days*((gross revenue - charity) / gross revenue))}}$$

To determine a hospital's Medicare share, CMS will estimate and settle the amount using the same methodology employed for determining a hospital's discharge-related amount, as described above.

CMS will obtain the data necessary to calculate the Medicare share from the revised cost report. The specific sources are as follows:

Data Element	Cost Report Location
Medicare Part A inpatient days	Worksheet E-1, Part II, line 2, which is the sum of Worksheet S-3, Part I, column 6, lines 1, 8-12, 16, and 17
Medicare Part C inpatient days	Worksheet E-1, Part II, line 3, which is the sum of Worksheet S-3, Part I, column 6, lines 2, 3, and 4
Total inpatient days	Worksheet E-1, Part II, line 4, which is the sum of Worksheet S-3, Part I, column 8, lines 1, 8-12, 16, and 17
Gross revenue (total charges)	Worksheet E-1, Part II, line 5, which is derived from Worksheet C, Part I, column 8, line 200
Charity care charges	Worksheet E-1, Part II, line 6, which is derived from Worksheet S-10, line 20

Charity Care. The data on charity care represent the "total initial payment obligation of patients who are given a full or partial discount, based on the hospital's charity care criteria (measured at full charges), for care delivered during this cost-reporting period for the entire facility." **If a hospital's cost report does not contain the data necessary for CMS to determine its charity care charges, they will be deemed to equal zero. Therefore, hospitals should ensure that charity care data are reported on the cost report.**

Schedule of Incentive Payments and Penalties. As specified in the ARRA, CMS will phase payments out over a four-year period in 25 percent increments. A hospital that is a meaningful EHR user starting in FYs 2011 through 2013 would receive the full amount in the first year, 75 percent of the full amount in the second year, 50 percent in the third year, 25 percent in the fourth year and no payments in the fifth year. A hospital that is a meaningful EHR user starting in FY 2014 would receive three years of payments, starting at the 75 percent level. A hospital that is a meaningful EHR user starting in FY 2015 would receive two years of payments, starting at the 50 percent level (Table 3).

As noted above, hospitals can receive up to four consecutive years of payment. The consecutive years begin when the first incentive payment is received (Payment Year 1). Hospitals that fail to meet meaningful use in a later year, will both miss the incentive payment for that year, and receive fewer years of payment. For example, a hospital that successfully demonstrates meaningful use in 2011, 2013 and 2014, but fails to do so in 2012, will receive three years of payment, following the transition factors laid out above. In this example, the full amount would be received in 2011 (Year 1), 50 percent in 2013 (Year 3), and 25 percent in 2014 (Year 4).

As specified in the ARRA, CMS will implement penalties in the form of market basket reductions for hospitals that are not meaningful users by FY 2015, unless significant hardship is demonstrated. In FY 2015, three-quarters of the applicable market basket update would be reduced by 33.33 percent; three-quarters of the market basket update would be reduced in FY 2016 by 66.66 percent, and in FY 2017 and beyond by 100 percent. Adoption in later years can prevent the update reductions, but no incentive payments would be available. CMS notes the penalties to eligible hospitals as set forth in the ARRA in the final rule, but defers specific proposals implementing these payment adjustments to future rulemaking. Table 3 shows the transition factors and penalties for hospitals under Medicare.

Table 3. Timeline of Medicare Payment Incentive Transition Factors and Update Penalties for Hospitals

First Fiscal Year in which the Hospital Receives Incentive Payment	Fiscal Year						
	2011	2012	2013	2014	2015	2016	2017
2011	100%	75%	50%	25%			
2012		100%	75%	50%	25%		
2013			100%	75%	50%	25%	
2014				75%	50%	25%	
2015					50%	25%	
Penalties apply if not a meaningful user by FY 2015. Three-quarters of the market basket update for each FY is reduced by:					33.33%	66.66%	100%

The fiscal intermediaries (FIs) and Medicare Administrative Contractors (MACs) will calculate the Medicare incentive payment for each hospital; however, a single contractor will distribute the annual lump sum payments to hospitals that are meaningful users. CMS estimates that it will take anywhere from 15 to 46 days from the time a hospital successfully attests to being a meaningful user to the time the initial incentive payment is made. The FIs and MACs will use the hospital's most recently filed cost report to estimate the incentive payment and then use the cost report beginning in the payment year to settle incentive payments based on actual data.

For each year payment is received, eligible hospitals will need to maintain evidence of their qualification to receive incentive payments for six years, and produce it in the event of an audit.

Payment Methods for Medicare FFS Incentive Payments: CAHs

As specified in the ARRA, CAHs also are eligible for Medicare incentive payments for FYs 2011 through 2015, but cannot receive payments for more than four years. While meaningful use determination is made based on the payment year, which coincides with the federal fiscal year, CAH incentive payments will be based on costs incurred during the CAH's cost-reporting period. CMS will reimburse qualifying CAHs for the Medicare share of their reasonable costs incurred for the purchase of certified EHR technology. The Medicare share for CAHs will be calculated using the same methodology as for subsection (d) hospitals (see above), plus 20 percentage points (not to exceed 100 percent). CMS proposes that the reasonable costs for the purchase of certified EHR technology would mean 100 percent of the reasonable acquisition costs, excluding any depreciation and interest expenses associated with the acquisition, incurred for the purchase of depreciable assets, such as computers and associated hardware and software, necessary to administer certified EHR technology. CAHs would be able to fully depreciate these costs in a single year, as well as include any past costs that have not yet been depreciated. The incentive payments are in lieu of any payments that would otherwise be made to CAHs for these costs.

The incentive payment will be made to qualifying CAHs through a prompt interim payment. To obtain payment, a CAH must attest to being a meaningful user and submit documentation to its FI or MAC to support the costs incurred for its health IT system. Once the FI or MAC reviews the documentation and determines the allowable amount, the payment contractor will make the initial incentive payment, which will be subject to a reconciliation process. CMS anticipates that the initial payments will generally be made within two months of the determination of the allowable amount.

For each year payment is received, eligible CAHs will need to maintain evidence of qualification to receive incentive payments for six years, and produce it in the event of an audit.

Per the ARRA, CMS states that, unless significant hardship is demonstrated, CAHs that are not meaningful users by FY 2015 will be subject to Medicare payment reductions, with ***all*** payments reduced to 100.66 percent of cost in FY 2015; 100.33 percent of cost in FY 2016; and 100 percent of cost in FY 2017 and beyond. CAHs may receive a hardship exemption for a maximum of only five years.

Hospital Eligibility for Medicaid Incentive Payments

The ARRA provides for Medicaid incentive payments to eligible hospitals that are meaningful users of certified EHR technology. The statute defines an eligible hospital as an acute-care hospital, a children's hospital or a cancer hospital. For purposes of the Medicaid EHR incentive payment program, CMS will define an acute-care hospital as a health care facility where the average length of patient stay is 25 days or fewer,

and that has a Medicare CCN that has the last four digits in the series 0001 through 0879 or 1300 through 1399. These CCN numbers encompass short-term general hospitals, and the 11 exempt cancer hospitals in the United States, as well as CAHs. They do not encompass psychiatric, rehabilitation or long-term care hospitals.

In a change from the proposed rule, CMS has included CAHs as eligible for Medicaid EHR incentive payments, if they meet the volume thresholds and other Medicaid requirements. In general, hospitals must have 10 percent Medicaid patient volume (less for children's hospitals). Medicaid payments to CAHs will follow the same formula as for other acute-care hospitals, which is based on the Medicare payment formula for subsection (d) hospitals described below.

CMS defines children's hospitals as separately certified children's hospitals, either freestanding or hospital-within-hospital. The agency will identify these hospitals as those with Medicare CCNs with the last four digits are in the 3300 to 3399 series, and that "predominantly" treat individuals under 21 years of age.

To qualify for Medicaid EHR incentive payments, acute-care hospitals, but not children's hospitals, must meet a patient-volume threshold of having a minimum of 10 percent of patient encounters attributable to Medicaid. For purposes of meeting the volume thresholds, individuals enrolled in a Medicaid managed care plan are included in the calculation as are individuals dually eligible for Medicare and Medicaid.

CMS finalizes two options for computing the volume thresholds. States will make a determination as to which option (or both) will be permitted.

- Defining patient encounters within any continuous representative 90-day period within the most recent calendar year prior to reporting. Under this method, which was set out in the proposed rule, the numerator is the hospital's total number of Medicaid patient encounters in that 90-day period, and the denominator is total patient encounters in that period. The 90-day period selected must be representative per a "plain meaning" test.

- Defining panel enrollees. Under this method, for situations where Medicaid enrollees are assigned to a panel, the numerator would be the hospital's total number of Medicaid patients assigned through a Medicaid managed care panel or similar provider structure with case assignment during the representative 90-day period, with at least one encounter during the preceding calendar year, PLUS all other Medicaid encounters with other, non-panel enrollees. The denominator is all patients assigned to the provider in that same 90-day period, with at least one encounter during the preceding calendar year, PLUS all other Medicaid encounters with other, non-panel enrollees.

CMS defines an "encounter" as:

- Services rendered to an individual per inpatient discharge where Medicaid or a Medicaid demonstration project paid for part or all of the service, or paid all or part of the individual's premiums, copayments and/or cost-sharing; and

- Services rendered to an individual in an emergency department on any one day where Medicaid or a Medicaid section 1115 demonstration project paid for part or all of the service, or paid all or part of the individual's premiums, co-payments and/or cost-sharing.

In response to comments, CMS in the final rule is providing states flexibility to propose alternative methodologies for the timeframe and all of the other elements for establishing patient volume (with the exception of the statutory percentage threshold).

Hospital Payment Methods for Medicaid Incentive Payments

State Medicaid agencies are fully responsible for administering and disbursing Medicaid incentive payments. Under the ARRA, state Medicaid programs, at their option, may receive 100 percent federal funding for providing Medicaid EHR incentive payments to eligible hospitals, and 90 percent federal funding for related state administrative expenses.

Hospitals may receive both Medicare and Medicaid EHR incentive payments. Hospitals with multi-state Medicaid practice locations will be required to choose only one state, annually, from which to receive Medicaid incentive payments.

The aggregate EHR incentive payment amount eligible for hospitals is the total amount the hospital could receive in Medicaid payments over four years of the program. The last year that a hospital may begin receiving Medicaid incentive payments is FY 2016. States will pay hospitals up to 100 percent of this aggregate amount over a minimum of a three-year period and a maximum of a six-year period. In any given payment year, the Medicaid incentive payment amount may not exceed 50 percent of the hospital's aggregate incentive payment, and in any two-year period, Medicaid incentive payments to a hospital may not exceed 90 percent of this aggregate amount. In addition, prior to FY 2016, payments can be made on a non-consecutive basis; the final regulations clarify that, after FY 2016, a hospital may not receive a payment unless it received a payment in the prior year.

The Medicaid EHR incentive payment formula for hospitals is consistent with the formula used under the Medicare incentive payment program. Specifically, incentive payments are calculated as Medicaid's share of the sum of $2 million, plus an additional discharge-related amount. A hospital receives $200 for each discharge for discharges starting with its 1,150th and continuing through its 23,000th discharge.

To determine a hospital's discharge-related amount, for year one, CMS proposes that states would use data on the hospital discharges from the hospital fiscal year that ends during the federal fiscal year prior to the fiscal year payment year. Then, for years two through four, the number of discharges would be based on the average annual growth rate (positive or negative) in the number of discharges for an individual hospital over the most recent three years of available data from an auditable data source.

The statutory formula for calculating a hospital's Medicaid share consists of total Medicaid inpatient days, including Medicaid managed care days and less dual-eligible days, divided by the product of total inpatient days and hospital charges excluding charity care divided by total charges:

$$\frac{\text{Medicaid inpatient days}}{\text{(total inpatient days*((gross revenue - charity) / gross revenue))}}$$

In addition, payments will be phased down over four years. The same transition factors will be used for Medicaid as for Medicare – 1.00, 0.75, 0.50 and 0.25 for years one through four, respectively.

Under the Medicaid (but not the Medicare) EHR incentive payment program, an eligible hospital may qualify for incentive payments in year one by adopting (acquiring and installing), implementing (commencing utilization), or upgrading (expanding the available functionality of) certified EHR technology, rather than being a meaningful user of such technology. CMS will permit Medicaid incentive payments for adopting, implementing or upgrading beginning January 2011.

For purposes of the "adoption, implementation, or upgrade" criteria, CMS also notes the following:

- For adoption, there must be evidence of actual installation, rather than "efforts" to install.
- Implementation activities would include staff training in the use of certified EHR technology, the data entry of patients' demographic and administrative data into the EHR, or establishing data exchange agreements and relationships between the provider's certified EHR technology and other providers, such as laboratories, pharmacies and health information exchanges.
- Upgrading EHR technology would include expanding functionality, such as the addition of clinical decision support, e-prescribing functionality, CPOE or other enhancements that facilitate the meaningful use of certified EHR technology.
- States are encouraged to request the submission of a vendor contract from providers to ensure the existence of EHR technology.

State Responsibility for Medicaid Incentive Payments

The final rule confirms a number of requirements for states to receive the higher federal financial participation (FFP) under this section. This includes standards set out in the regulations for:

- State monitoring and reporting requirements;
- State submission of a state Medicaid HIT Plan to CMS, and the requirements for such Plans, including systems requirements, processes for determining eligibility of providers, monitoring and validation, provider payment processes, and provisions for combating fraud and abuse;
- State responsibilities for tracking use of the incentive funds, oversight of the program, and initiatives to encourage the adoption of HIT technology;

- Prior approval requirements;
- Disallowance of FFP, termination of FFP, and procedures for reconsideration of adverse determinations by CMS;
- Access to systems and records;
- Procurement standards;
- Financial oversight and monitoring of expenditures; and
- Appeals processes for providers.

Medicare and Medicaid EHR Incentive Programs for Physicians and Other Eligible Professionals

Hospital-based Professionals. CMS' final rule implements provisions of the AHA-supported *Continuing Extensions Act of 2010*, which made physicians providing ambulatory services in hospital-based clinics and outpatient departments eligible for incentive payments (and subject to Medicare penalties). A hospital-based EP is more narrowly defined in the final rule as an EP who provides 90 percent or more of his/her services in an inpatient hospital or emergency department setting. Hospital is defined broadly (any area that is on campus or any location that meets the "provider-based" definition). CMS estimates that about 15 percent of physicians are hospital-based under the new definition, down from about 30 percent in the proposed rule. Hospital-based EPs continue to be ineligible for the incentive payments (and penalties). EPs providing services in hospital-based clinics and outpatient departments can get incentive payments as long as they meet the same meaningful use requirements as all other EPs.

CMS will make a determination of whether an EP is hospital-based by analyzing physician claims from the previous payment year. As requested by the AHA, the agency plans to inform EPs of their hospital-based status as part of the registration process.

Meaningful Use Requirements for Eligible Professionals. The meaningful use requirements for physicians and other EPs are similar to hospitals; however, there are differences in some objectives and measures (Table 4). EPs will need to meet 15 "core," or mandatory, objectives and an additional five objectives chosen from a "menu set" of 10 options (with one being a public health measure), for a total of 20 objectives. The EP objectives and measures are listed in Table 4 below. Like hospitals, EPs will need to use CPOE to enter medications for more than 30 percent of patients. In addition, EPs will be required to use e-prescribing for more than 40 percent of all prescriptions.

Table 4: Stage 1 Objectives and Measures for Eligible Professionals

	OBJECTIVES	MEASURES
	Core Set: Eligible professionals must achieve all of the following objectives and meet the required threshold	
C1	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 30% of unique patients with at least one medication in their medication list seen by the EP have at least one medication order entered using CPOE
C2	Implement drug-drug and drug-allergy interaction checks	The EP has enabled this functionality for the entire EHR reporting period
C3	Generate and transmit permissible prescriptions electronically (eRx)	More than 40% of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology
C4	Record demographics • Preferred language • Gender • Race • Ethnicity • Date of birth • Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 50% of all unique patients seen by the EP have demographics recorded as structured data
C5	Maintain an up-to-date problem list of current and active diagnoses	More than 80% of all unique patients seen by the EP have at least one entry or an indication that no problems are known for the patient recorded as structured data
C6	Maintain active medication list	More than 80% of all unique patients seen by the EP have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data
C7	Maintain active medication allergy list	More than 80% of all unique patients seen by the EP have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data

	OBJECTIVES	MEASURES
C8	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 more than 50% of all unique patients age 2 and over seen by the EP, height, weight and blood pressure are recorded as structured data
C9	Record smoking status for patients 13 years old or older	More than 50% of all unique patients 13 years old or older seen by the EP have smoking status recorded as structured data
C10	Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance of that rule	Implement one clinical decision support rule
C11 Report ambulatory clinical quality measures to CMS or the States		For 2011, provide aggregate numerator, denominator, and exclusions through attestation as discussed in section II(A)(3) of [the] final rule
		For 2012, electronically submit the clinical quality measures as discussed in section II(A)(3) of [the] final rule
C12	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request	More than 50% of all patients of the EP who request an electronic copy of their health information are provided it within 3 business days
C13	Provide clinical summaries for patients for each office visit	Clinical summaries provided to patients for more than 50% of all office visits within 3 business days
C14	Capability to exchange key clinical information (for example, problem list, medication list, medication 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
C15	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) [under the HIPAA Security Rule] and implement security updates as necessary and correct identified security deficiencies as part of its risk management process

	OBJECTIVES	MEASURES
	Menu Set:	
	OBJECTIVES	**MEASURES**
M1	Implement drug-formulary checks	The eligible EP has enabled this functionality and has access to at least one internal or external drug formulary for the entire EHR reporting period
M2	Incorporate clinical lab-test results into certified EHR technology as structured data	More than 40% of all clinical lab tests results ordered by the EP during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data
M3	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the EP with a specific condition
M4	Send reminders to patients per patient preference for preventive/follow up care	More than 20% of all unique patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period
M5	Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, medication allergies) within four business days of the information being available to the EP	More than 10% of all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information
M6	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	More than 10% of all unique patients seen by the EP are provided patient-specific education resources
M7	The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP
M8	The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50% of transitions of care and referrals

	OBJECTIVES	MEASURES
M9	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP submits such information have the capacity to receive the information electronically)
M10	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with 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 and follow-up submission if the test is successful (unless none of the public health agencies to which an EP submits such information have the capacity to receive the information electronically)

Quality Reporting by Eligible Professionals. EPs also will need to report on six clinical quality measures calculated from a certified EHR: three required core measures and three additional measures chosen from a set of 38 measures that have been specified for collection through EHRs. If the denominator for one or more of the core measures for an EP is zero, the EP will be required to report results for up to three alternate core measures. The clinical quality measures are listed by clinical category in Table 5. The technical specifications for these measures are available at http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage.

As with hospitals, the same clinical quality measures adopted for the Medicare EHR incentive program will apply for Medicaid. EPs eligible for the Medicaid program must report their clinical quality measure data to the states. In the final rule, CMS requires states to submit for approval their plans to accept clinical quality measures (through attestation or electronic submission). CMS may include additional measures that were part of the proposed rule, but not finalized in future rulemaking.

Like hospitals, EPs will be expected to report quality measurement data by attestation in 2011, but use electronic submission in 2012. CMS will post the technical requirements for submission of quality data by EPs submission on its website by July 1, 2011.

TABLE 5. Clinical Quality Measures for Eligible Professionals

Condition	Measure
Core Measures (Must be Reported)	
Hypertension	Blood pressure management
Prevention	Tobacco use assessment and tobacco cessation intervention
	Adult weight screening and follow-up
Alternate Core Measures (Required for Submission if any of the Core Measures = Zero)	
Prevention	Weight assessment and counseling for children and adolescents
	Preventive care and screening: influenza immunization for patients ≥ 50 years old
	Childhood immunization status
Must Choose three of the Following 38 Measures to Report on:	
Diabetes	Hemoglobin A1c poor control
	Hemoglobin A1c control (‹8.0%)
	Low Density Lipoprotein (LDL) management and control
	Blood pressure management
	Diabetic retinopathy: documentation of presence or absence of macular edema and level of severity of retinopathy
	Diabetic retinopathy: communication with the physician managing ongoing diabetes care
	Eye exam
	Urine screening
	Foot exam
Ischemic Vascular Disease	Blood pressure management
	Use of aspirin or another antithrombotic
	Complete lipid panel and LDL control
Preventive Care	Pneumonia vaccination for older adults
	Breast cancer screening
	Colorectal screening
	Smoking and tobacco use cessation, medical assistance: (a) advising smokers and tobacco users to quit (b) discussing smoking and tobacco cessation medications (c) discussing smoking and tobacco use cessation strategies
	Initiation and engagement of alcohol or other drug dependence treatment
	Prenatal care: screening for Human Immunodeficiency Virus (HIV)
	Prenatal care: anti-D immune globulin
	Controlling high blood pressure
	Cervical cancer screening
	Chlamydia screening for women
	Oncology breast cancer: hormonal therapy for stage IC-IIIC

Condition	Measure
Cancer	estrogen receptor/progesterone receptor positive breast cancer
	Oncology colon cancer: chemotherapy for stage III colon cancer patients
	Prostate cancer: avoidance of overuse of bone scan for staging low risk prostate cancer patients
Coronary Artery Disease (CAD)	Beta-blocker therapy for CAD patients with prior myocardial infarction
	Drug therapy for lowering LDL-cholesterol
	Oral antiplatelet therapy prescribed for patients with CAD
Heart Failure	Angiotensin-Converting Enzyme (ACE) or Angiotensin Receptor Blocker (ARB) therapy for left ventricular systolic function
	Beta-blocker therapy for left ventricular systolic dysfunction
	Warfarin therapy patients with atrial fibrillation
Depression	Anti-depressant medication management: (a) effective acute phase (b) effective continuation phase treatment
Glaucoma	Primary open angle glaucoma: optic nerve evaluation
Asthma	Asthma pharmacologic therapy
	Asthma assessment
	Use of appropriate medications for asthma
Pharyngitis	Appropriate testing for children with pharyngitis
Imaging	Low back pain: use of imaging studies

Medicare Incentive Payments for Eligible Professionals. The HITECH Act provides Medicare or Medicaid incentive payments for EPs who are meaningful users of certified EHR technology, as long as they are not hospital-based. Physicians who qualify as a Medicaid EP must choose between the Medicare and Medicaid EHR incentive programs – they may not participate in both. They may, however, switch between the two programs one time. As mentioned earlier, hospital-based physicians are defined as those who provide 90 percent or more of their services in an emergency room or inpatient hospital setting.

In the rule, CMS adopts as final its proposed definition of the term "eligible professional" under the Medicare incentive program to mean:

- a doctor of medicine or osteopathy;
- a doctor of dental surgery or dental medicine;
- a doctor of podiatric medicine;
- a doctor of optometry; or
- a chiropractor.

To be an "eligible professional" the doctor must also be legally authorized to practice their profession under state law. CMS did not expand the EP definition to include non-physician practitioners and health professionals, such as physician assistants and nurse

practitioners. And, CMS did not expand the definition to consolidate it with the Medicaid program EP definition stating that the agency does not have authority to do so.

EHR Incentive payments for Medicare EPs will begin in CY 2011 and continue through CY 2016. The last year that an EP may begin participation in the program is CY 2014. Eligible professionals will receive an incentive payment equal to 75 percent of Medicare allowed charges for covered professional services he or she delivers, subject to an annual cap. The annual limit varies, however, based on the year in which the EP first qualifies as a meaningful user of certified EHR technology (see table below):

Table 6. Eligible Professional Incentive Payments under Medicare

First Payment Year of the EP Incentive Program	Fiscal Year						
	2011	2012	2013	2014	2015	2016	Total
2011	$18,000	$12,000	$ 8,000	$4,000	$2,000		$44,000
2012		$18,000	$12,000	$8,000	$4,000	$2,000	$44,000
2013			$15,000	$12,000	$8,000	$4,000	$39,000
2014				$12,000	$8,000	$4,000	$24,000
2015					$0	$0	$0

EPs who *predominantly* deliver care in a geographic Health Professional Shortage Area (HPSA) are eligible for a 10 percent bonus payment for each payment year in which they qualify. In the rule, CMS adopts as final its definition of "*predominantly*" to mean at least 50 percent of the EPs covered professional services are furnished in a geographic HPSA during a calendar year.

CMS adopts as final its proposal to make a single, consolidated, annual incentive payment to eligible EPs. Payments will be made on a rolling basis, as soon as CMS confirms that an EP has demonstrated meaningful use for the applicable reporting period. For the first payment year, the reporting period is 90 days. For those wanting to receive payments for CY 2011, October 1, 2011 is the last day an EP could begin meaningful use of certified EHR technology and still qualify for incentive payments. For subsequent years, the reporting period is the full calendar year. EPs that qualify for an additional HPSA payment will receive that bonus payment separately from the EHR incentive payment.

The statute allows EPs to "reassign" their EHR incentive payment to an employer or other entity that bills for the physician's services. As proposed, CMS will allow EPs to transfer the incentive payment to *only one* employer or entity with which they have valid employment or a contract for such reassignment. If an EP belongs to more than one practice, CMS had proposed that the EPs would need to select *one* tax identification number (TIN) to receive the EHR incentive payment. In the final rule, CMS acknowledged that many physicians are enrolled in Medicare and Medicaid through their Social Security Number, and hence will allow the use of a physician's Social Security Number in lieu of a TIN. Also in the final rule, CMS encourages EPs and entities to review their current contractual arrangements to determine whether they

appropriately address the transfer of eligible EHR incentive payments. If contracts need to be revised, the agency states that the reassignment of payment must adhere to Medicare laws, rules, and regulations, including those related to fraud, waste and abuse.

In general, eligible professionals who are not meaningful users of EHR by CY 2015 will receive a reduction in their Medicare physician fee schedule payment amount. This penalty amount is 1 percent in CY 2015, 2 percent in CY 2016, and 3 percent for CY 2017 and beyond. However, the HHS Secretary may increase this penalty amount up to a maximum of 5 percent in CY 2018 and beyond if the Secretary determines that less than 75 percent of EPs are meaningful users of EHR technology. The law does include a "significant hardship exception" provision that allows the Secretary to exempt certain EPs from the penalty based on a case-by-case basis. The above payment reductions do not apply to hospital-based physicians who do not qualify as Medicare EPs.

EPs participating in the Medicare EHR incentive program are eligible to participate in other Medicare incentive programs, such as the Medicare physician quality reporting initiative (PQRI), the Medicare electronic health record demonstration (EHR Demo) and the Medicare care management performance demonstration (MCMP). However, if an EP chooses to participate in the Medicare EHR incentive program, they **cannot** also participate in the Medicare electronic prescribing (eRx) incentive program simultaneously in the same program year.

Medicaid Incentive Payments for Eligible Professionals. The Medicaid EHR Incentive Program includes a broader range of providers and offers a more generous set of payment incentives than under Medicare. Also, there are not payment penalties for EPs under Medicaid.

In the rule, CMS adopts as final its proposed definition of the term "eligible professional" under the Medicaid incentive program to include:

- Physicians;
- Nurse practitioners;
- Certified nurse-midwives;
- Dentists; and
- Physician assistants working in a federally qualified health center (FQHC) or rural health clinic (RHC).

To be eligible for the Medicaid incentives, physicians and other EPs must meet specific Medicaid patient volume thresholds. They must have a minimum of 30 percent Medicaid patient volume, although a lower Medicaid volume threshold of 20 percent applies to pediatricians. In addition, EPs practicing in RHCs and FQHCs can include "needy individuals" in their 30 percent patient volume threshold. This would include uninsured, charity care, and CHIP volume in the calculation, as well as Medicaid. States will determine how to calculate the patient volumes, subject to approval by CMS.

EPs eligible for Medicaid incentive payments can receive up to $63,750 over six years. They would be paid $21,250 for the first payment year and $8,500 for each of the

remaining five payment years. The incentives are the same regardless of the start year. EPs have until 2016 to begin the incentive program, with incentives available through 2021. EPs under the Medicaid program are not eligible for a HPSA bonus.

As with hospitals, the first year of Medicaid payment does not require demonstration of meaningful use, but can support adoption, implementation and upgrade of certified EHR technology. If an EP chooses to participate in the Medicaid EHR incentive program, they can simultaneously participate in the Medicare eRx incentive program. Table 7 shows the schedule of incentive payments under Medicaid.

Table 7. Eligible Professional Incentive Payments under Medicaid

First CY for Which the EP Receives an Incentive Payment						
	CY 2011	**CY 2012**	**CY 2013**	**CY 2014**	**CY 2015**	**CY 2016**
CY 2011	$21,250					
CY 2012	$8,500	$21,250				
CY 2013	$8,500	$8,500	$21,250			
CY 2014	$8,500	$8,500	$8,500	$21,250		
CY 2015	$8,500	$8,500	$8,500	$8,500	$21,250	
CY 2016	$8,500	$8,500	$8,500	$8,500	$8,500	$21,250
CY 2017		$8,500	$8,500	$8,500	$8,500	$8,500
CY 2018			$8,500	$8,500	$8,500	$8,500
CY 2019				$8,500	$8,500	$8,500
CY 2020					$8,500	$8,500
CY 2021						$8,500
Total	**$63,750**	**$63,750**	**$63,750**	**$63,750**	**$63,750**	**$63,750**

CMS Operations

Operational Start Date and Registration Process. CMS has delayed the operational start of the Medicare EHR Incentive Program for hospitals until January 2011. Hospitals will be able register for the program at that time through the CMS meaningful use webpage: http://www.cms.gov/EHRIncentivePrograms. CMS also will use this webpage to post updated information, including registration information and educational materials.

Registration does not obligate a hospital or CAH to attest to meaningful use, but signifies interest in the program. As part of registration, CMS will collect the name, business address and business phone numbers of all EPs, eligible hospitals and

CAHs participating in the Medicare fee-for-service EHR incentive program. As required by law, CMS will post information on meaningful users to a public website.

In order to register for the incentive programs, hospitals, CAHs and EPs must have a national provider identification number (NPI), be registered through the Provider Enrollment, Chain and Ownership System database (PECOS), and have an active user account in the National Plan and Provider Enumeration System (NPPES).

Attestation. CMS finalized its proposal that hospitals use a one-time attestation at the end of the reporting period to report the health IT functionality measures and list the certified EHR technology used. Typically, attestation does imply certification by the individual or entity that the statements are correct, true, and genuine. False attestation may have significant legal consequences.

Reporting mechanisms. CMS clarified that reporting will occur through a secure mechanism, such as a secure online portal. The agency did not provide additional operational details on the format attestation will take. The first opportunity for hospitals to attest that they meet meaningful use objectives will be in April 2011, for the reporting period of any continuous 90 days between October 1, 2010 and March 30, 2011. Once the program is operational, CMS notes that hospitals and physicians will be able to attest as soon as they have finished a reporting period (90 days for the first payment year; a fiscal year thereafter). They will have 60 days after the end of the reporting period to attest.

Payments. Hospital payments will be calculated by Medicare's contractors, with an interim payment finalized upon cost report settlement. However, a single contractor will make the payments. CMS expects payments will be made to those who successfully meet the meaningful use criteria within 15 to 46 days of approval.

Retention of Records and Audits. Hospitals, CAHs and EPs must keep documentation supporting their demonstration of meaningful use and use of a certified EHR for six years. Although the final rule does not outline how audits might take place, CMS and states (for Medicaid) may review any organization's demonstration of meaningful use to validate eligibility, as well as components of the payment formulas. The agency says it will "identify and recoup overpayments made under the incentive payment programs that result from incorrect or fraudulent attestations, quality measures, cost data, patient data, or any other submission required to establish eligibility or to qualify for a payment. The overpayment will be recouped by CMS or its agents from the EP, eligible hospital, MA organization, CAH, other entities to whom the right to payment has been assigned/reassigned, or, in the case of Medicaid, from the State Medicaid agencies."

Appeals. CMS finalized requirements for state Medicaid programs to establish appeals processes for providers. With respect to adopting a similar appeals process for Medicare, as requested by the AHA and other commenters, CMS states only that the agency expects "to address Medicare appeals in future guidance." The statute broadly prohibits administrative or judicial review of the Medicare incentive program.

Impact Analysis. CMS estimates that a total of $9.7 billion to $27.4 billion will be paid in incentive payments (net of penalties) to hospitals and physicians from 2011 to 2019. Of that, CMS estimates that hospitals should receive between $8.4 billion and $14.4 billion in Medicare and Medicaid incentives. Given uncertainty over the rate of adoption, CMS provided both a low and high estimate.

NEXT STEPS

Share this advisory with your senior management team and ask your chief information officer to examine how this final rule will affect your plans to implement EHRs and achieve meaningful use. If you have not already done so, you or your CIO should discuss with your EHR vendors the products they intend to certify. Ask specifically about their timelines for upgrades and new installations.

Watch for more educational materials on the AHA's website: www.aha.org.

The AHA will continue to advocate for changes to address the multi-campus hospital issue, a temporary grandfathering provision for certification, and the special circumstances faced by rural hospitals.

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