



January 29, 2010

AAMC Summary and Analysis

Health Information Technology (HIT) Proposed and Interim Final Regulations: Provisions of Interest to the Academic Medical Community

On January 13, 2010, the Centers for Medicare and Medicaid Services (CMS) published in the *Federal Register* a notice of proposed rulemaking (NPRM) entitled “Medicare and Medicaid Programs; Electronic Health Record Incentive Program.” 75 Fed Reg. 1844 (Jan. 13, 2010). The same day, the Office of the National Coordinator for Health Information Technology (ONC) published in the *Federal Register* an interim final rule (IFR) with comment period entitled “Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology.” 75 Fed Reg. 2014 (Jan. 13, 2010). Together, the two rules set out the initial requirements that eligible professionals and hospitals must meet to qualify for incentives and avoid payment penalties in later years for the adoption and use of electronic health records (EHRs) authorized by the American Recovery and Reinvestment Act (ARRA). Each rule has a 60 day comment period. A third rule describing the process that will have to be followed to certify EHR technology is in development and will be released in the near future.

Comments must be received by March 15, 2010. They may be submitted electronically at www.regulations.gov. When submitting comments, please refer to file code CMS-0033-P for the CMS proposed rule and file code RIN 0991-AB58 for the ONC interim final rule. Please also send a copy of your comment letters to Lori Mihalich-Levin, lmlevin@aamc.org.

The AAMC will be submitting comment letters on both regulations and welcomes any suggestions from members. For comments or questions related to requirements for eligible professionals, please contact Ivy Baer, ibaer@aamc.org. For comments or questions related to requirements for hospitals, please contact Lori Mihalich-Levin (lmlevin@aamc.org). For comments or questions related to EHR standards or certification, please contact Morgan Passiment (mpassiment@aamc.org).

A slide presentation that provides an overview of the regulations is also available on the AAMC’s HIT website at www.aamc.org/hit.

Highlights of the CMS Proposed Regulation

- CMS proposes to define the adoption of meaningful use by stages. The current proposed regulation only proposes meaningful use criteria for what CMS calls “Stage 1.” CMS will propose updated criteria for Stage 2 of meaningful use prior to the 2013 payment year, and will propose updated meaningful use criteria for Stage 3 (the final stage) in time for the 2015 payment year. Eligible professionals (EPs) and eligible hospitals must meet Stage 3 criteria by the 2015 payment year in order to avoid penalties.
- For the first payment year only -- EPs and eligible hospitals must show that they meet the meaningful use criteria for any continuous 90-day period. (The first payment year is the year EPs and eligible hospitals first receive incentive payments for meaningful use.) For subsequent years, meaningful use must be met for the entire calendar year (EPs) or entire federal fiscal year (eligible hospitals).
- For EPs and hospitals to demonstrate meaningful use in 2011 or 2012, they must report on HIT functionality and quality measures. For 2011, all reporting will be through attestation. In 2012, quality reporting will be through electronic submission (if CMS has the capacity to accept the data).
 - EPs and eligible hospitals must meet **all** IT functionality measures (25 measures for EPs; 23 measures for Hospitals).
 - EPs must report on a core set of quality measures and one additional set of measures grouped by specialty. In the final rule CMS will announce which specialties will be exempt from selecting and reporting on a specialty measures group, although even exempt specialties will have to report on the core set of quality measures.
 - Eligible hospitals must report on inpatient quality measures. CMS has proposed a set of 35 quality measures, however only those measures for which electronic specifications are available by the final rule will be finalized. Measures included in the EHR incentive program that are also required for the current pay-for-reporting program (RHQDAPU) only need to be reported once through the EHR program.
- EPs and eligible hospitals must use EHRs that meet the standards and certification criteria published in the ONC interim final rule.
- Hospital-based professionals do not qualify for EHR incentives. A determination as to which physicians are hospital-based will be made on the basis of place of service (POS) codes. If at least 90 percent of an EP’s services are provided in a hospital setting, either inpatient or outpatient (POS codes 21, 22, and 23), then the physician is hospital-based. Hospital-based professionals will not be subject to penalties in 2015 and beyond for failure to become meaningful users.
- Eligible hospitals are defined by Medicare provider number (CCN), so that if a health system has multiple hospitals under one CCN, the health system will receive only one EHR incentive payment.

- State participation in the Medicaid incentive program is voluntary. The proposed Medicare definition of meaningful use will serve as the minimum standard for participation in Medicaid state EHR programs. States may elect to add additional meaningful use objectives, or may modify how the proposed objectives are measured.
- EPs must choose to receive either Medicare or Medicaid incentives. They will be provided with one opportunity to switch from one program to the other, but in no case may their total incentives exceed the Medicaid amount, which is higher than Medicare.
- Eligible hospitals may receive both Medicare and Medicaid incentives.
- EPs and hospitals with multi-state Medicaid practice locations may annually select *one* state from which to receive incentive payments.

Overview

ARRA sets out the following minimum requirements to qualify for incentives for EHR adoption and use:

- Using EHR technology in a meaningful manner, including the use of electronic prescribing;
- Using certified EHR technology that allows the exchange of information to improve quality of health care, such as promoting care coordination; and
- Reporting on clinical quality measures.

The incentive payments for “meaningful use” are available under the Medicare and Medicaid programs to providers that meet the requirements that will be finalized by CMS. In CMS’s proposed rule, the agency has developed two sets of criteria: one for eligible professionals (EPs) (including physicians and other clinicians) and another for eligible hospitals. Note that the CMS rule and the ONC interim final rule are interrelated, such that achieving meaningful use requires compliance with the criteria set forth in both rules.

Medicare Incentives*

For the Medicare fee-for-service (FFS) incentive program, certain EPs and hospitals that adopt and meaningfully use certified EHR technology are eligible to receive incentives. Hospitals may receive both Medicare and Medicaid incentives. Eligible professionals must choose between the Medicare and Medicaid incentives, although CMS proposes allowing a one-time change between the Medicare and Medicaid incentive programs. The Medicaid program requirements for adoption and payment (see “Medicaid Incentive” section below) are different than those for Medicare, but CMS proposes that the Medicaid program share many of the definitions and elements of the Medicare incentive program.

* All page numbers in this section and the following section refer to the CMS rule published in the *Federal Register* on January 13, 2010.

Eligible Professionals and Hospital-Based Eligible Professionals (pages 1904 -1908)

For the Medicare FFS incentives, an EP may be 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.” (p. 1907) EPs’ incentives are determined by National Provider Identifier (NPI). If an EP bills Medicare using more than one tax ID number (TIN), the EP must choose which TIN will receive incentives.

As required by ARRA, hospital-based eligible professionals do *not* qualify for EHR incentives. According to CMS, this exclusion is based on the presumption that a hospital-based EP is using the facilities and equipment of the hospital, including any qualified EHR implemented by the hospital. CMS proposes that EPs who provide “substantially all” of their services in the hospital setting (both inpatient and outpatient) will be considered “hospital-based” and, therefore, not eligible for incentives.

ARRA states that whether an EP is hospital-based depends on whether the EP “furnishes substantially all of such services in a hospital setting (whether inpatient or outpatient) and through the use of the facilities and equipment, including qualified electronic health records, of the hospital.” The law further explains that “the determination of whether an eligible professional is a hospital-based eligible professional shall be made on the basis of the site of service (as defined by the Secretary) and without regard to any employment or billing arrangement between the eligible professional and any other provider.”

Given this statutory language, CMS proposes to define “substantially all” as furnishing *at least 90 percent of services in a hospital setting, either inpatient or outpatient*. The outpatient setting includes outpatient hospital settings in the main provider, on-campus, and off-campus provider-based departments, and entities having provider-based status. CMS proposes to use three POS codes on physician Medicare claims to make the determination about whether the services are provided in a hospital setting: 21 (inpatient hospital), 22 (outpatient hospital), and 23 (emergency room, hospital). The same definition will be used for both Medicare and Medicaid incentives. The hospital-based determination will be made annually by analyzing an EP’s claims history from the prior year. For Medicaid incentives, the determination will be made by state Medicaid agencies by analyzing an EP’s Medicaid claims data. For EPs who deliver care through the Medicaid Managed Care program, the analysis will be based on either encounter data or other equivalent data.

CMS estimates that approximately 27 percent of Medicare EPs will be considered hospital-based and, therefore, not eligible to receive any incentive payments. CMS also estimates that 12-13 percent of Medicare family practitioners will be hospital-based. In the proposed rule, CMS expresses concern that the large number of physicians who will be considered hospital-based may prove to be a disincentive for hospitals to invest in EHR systems in their outpatient primary care sites. CMS indicates, without elaborating on any details, that the agency may use future

rulemaking to consider ways to realign the meaningful use objectives and criteria to include a broader definition of hospital care that would include outpatient services.

CMS proposes to use the same definition of hospital-based for the Medicaid program (p. 1930), with the exception that Medicaid EPs practicing predominantly in a federally qualified health center (FQHC) or a rural health center (RHC) are not subject to the hospital-based exclusion.

Analysis: CMS has proposed a very broad definition of “hospital-based eligible professional” that may prohibit many faculty physicians from qualifying for EHR incentive payments. The AAMC will be working with members to understand the impact of this proposal and to develop an alternative approach. While the AAMC appreciates CMS’s concern for adoption rates in outpatient primary care sites, we will encourage the agency to also make incentives available to physician practices that invest in the electronic health records that are used in those sites. A survey by the AAMC indicates on average, clinical services (faculty practice, department, or medical school) contribute to over half the EHR costs in provider-based clinics. We are also interested in CMS’s statement about how a “realignment of meaningful use objectives” might affect a hospital’s ability to meet the meaningful use requirements and will encourage the agency to elaborate on this suggestion.

Eligible Hospitals for Medicare Fee-for-Service Incentives (page 1911)

“Subsection (d) hospitals” (as defined by §1886(d)(1)(B) of the Social Security Act) are eligible for Medicare fee-for-service incentive payments. Hospitals and hospital units that are excluded from the inpatient prospective payment system (IPPS), including psychiatric, rehabilitation, long-term care, children’s, and cancer hospitals, are *not* eligible for Medicare incentive funding. (Note different hospital eligibility requirements for Medicaid below.)

For both Medicare and Medicaid incentives, CMS proposes to identify eligible hospitals by the CMS Certification Number (CCN or hospital provider number) on a hospital’s cost report. Although CMS does not discuss the implications of this proposal, identifying hospitals by provider number means that hospital systems with multiple hospitals under one CCN would be able to qualify for only *one* set of incentive payments.

Analysis: AAMC is extremely concerned that CMS’s proposal to identify hospitals solely by hospital provider number would result in incentives being distributed in a manner that does not foster widespread EHR adoption and use. Specifically, a health care system with multiple hospitals but a single Medicare provider number would be disadvantaged, because the system would be eligible for only one base amount and would be much more likely to reach the discharge cap. In addition, such a health care system would be subject to HIT penalties at the system level, even if, for example, only one of the system’s multiple hospitals was not found to be a meaningful user. Linking HIT incentive payments only to the single Medicare provider number also would not

accurately reflect the deployment costs of all EHR systems across all hospitals in a system. The AAMC will encourage CMS to use a multi-pronged approach to identifying eligible hospitals - one that recognizes the varied organizational structure of multi-hospital systems, including by a distinct Medicare provider number, a distinct emergency department, or a distinct state hospital license. We welcome any additional suggestions for addressing this issue.

Payment Years and Reporting Years (pages 1848 – 1850)

Medicare incentives may begin with calendar year 2011 for EPs and fiscal year 2011 for hospitals. In contrast, Medicaid incentives for adopting, implementing, or upgrading certified EHR technology can begin in calendar year 2010 (for EPs) and fiscal year 2010 (for hospitals). (See Medicaid Incentives below.)

In the proposed rule, CMS references payment years by dates and by year of EHR adoption. For example, the 2011 payment year refers to calendar year 2011 for EPs and fiscal year 2011 for eligible hospitals. The “first payment year” references the first calendar or fiscal year for which an EP or hospital receives an incentive payment.

For the first payment year only, the EHR reporting period may be any continuous 90-day period in which an EP or eligible hospital successfully demonstrates meaningful use of certified EHR technology. For the second payment year and any subsequent payment years, the reporting period is the entire payment year.

Examples:

- Hospital A first demonstrates that it is a meaningful user from October 1, 2010 through December 30, 2010. It will receive the FY 2011 Medicare incentive payments. To qualify for FY 2012 Medicare incentive payments, it must demonstrate meaningful use for the entire FY 2012 (i.e. October 1, 2011 – September 30, 2012).
- Eligible Professional A first demonstrates that she is a meaningful user from October 2, 2011 through December 31, 2011. She will receive the CY 2011 Medicare incentive payments. To qualify for CY 2012 Medicare incentive payments, she must demonstrate meaningful use for the entire CY 2012 (i.e. January 1, 2012 through December 31, 2012).
- Hospital B first demonstrates that it is a meaningful user from July 2, 2012 through September 30, 2012. It will receive the FY 2012 Medicare incentive payments. To qualify for the FY 2013 Medicare incentive payments, it must demonstrate meaningful use for the entire FY 2013 (i.e. October 1, 2012 – September 30, 2013).
- Eligible Professional B first demonstrates that he is a meaningful user from January 1, 2013 through April 1, 2013. He will receive the CY 2013 Medicare incentive payments. To qualify for the CY 2014 Medicare incentive payments, he must demonstrate meaningful use for the entire CY 2014 (i.e. January 1, 2014 – December 31, 2014).

Stages of Meaningful Use (page 1852-1854)

To receive incentives, EPs and eligible hospitals must demonstrate meaningful use of certified EHR technology. CMS proposes three stages of meaningful use (p. 1852), in which criteria become increasingly complex and comprehensive over time:

- Stage 1 (for initial meaningful use criteria) focuses on electronically capturing health information in a coded format; using that information to track key clinical conditions and communicating that information for care coordination; implementing clinical decision support tools; and reporting clinical quality measures and public health information.
- Stage 2 (criteria to be proposed by the end of 2011) will expand Stage 1 criteria to encourage the use of health IT for continuous quality improvement at the point of care and the exchange of information in the most structured format possible.
- Stage 3 (criteria to be proposed by the end of 2013) will focus on promoting improvements in quality, safety and efficiency; decision support for national high priority conditions; patient access to self management tools; and access to comprehensive patient data; and improving population health.

The CMS proposed rule outlines specific requirements for Stage 1 *only*. A proposal on Stage 2 criteria will be published by the end of 2011 and a proposal on Stage 3 criteria will be published by the end of 2013.

Progression from Stage 1 to Stage 3

CMS proposes that by 2015, *all* EPs and hospitals must meet the Stage 3 criteria to be considered meaningful users of EHR technology. (See Table 1 below.) Therefore, the later EPs or eligible hospitals initially qualify as meaningful users, the less time they have to ramp up to Stage 3. For example, if the first payment year for EHR adoption is 2011, then the EP or eligible hospital has two years of meeting Stage 1 criteria before moving to Stage 2, two years at Stage 2, and then Stage 3 by 2015. By contrast, those EPs and hospitals adopting EHRs in 2013 must advance much more rapidly, moving from Stage 1 through Stage 3 in two years, since an EP would have to meet Stage 3 criteria by January 1, 2015, and a hospital by October 1, 2014.

Table 1: Stage of Meaningful Use Criteria by Payment Year

First Payment Year for EP or Hospital	Payment Year (CY for EP; FY for hospitals)				
	2011	2012	2013	2014	2015+**
2011	Stage 1	Stage 1	Stage 2	Stage 2	Stage 3
2012		Stage 1	Stage 1	Stage 2	Stage 3
2013			Stage 1	Stage 2	Stage 3
2014				Stage 1	Stage 3
2015+*					Stage 3

* Avoids payment adjustments only for EPs in the Medicare EHR Incentive Program.

** Stage 3 criteria of meaningful use or a subsequent update to the criteria if one is established

Source: *Federal Register*, Table 1 (p. 1854).

Analysis: ARRA requires that meaningful use be defined in stages, with more stringent requirements over time. CMS’s implementation of these stages could prove problematic, particularly for later adopters who are not eligible, under CMS’s proposal, to progress at the same rate through the proposed stages. There is no legislative requirement that all EHR adopters be at Stage 3 by 2015, and the AAMC is concerned that later adopters will face penalties because they will not have sufficient time to ramp up to Stage 3 by the 2015 proposed deadline.

Demonstrating HIT Functionality (pages 1858-1870)

CMS has proposed a series of objectives and measures that EPs and eligible hospitals must attest to in order to demonstrate Stage 1 meaningful use of HIT functionality. The measures are largely based on meaningful use recommendations that the HIT Policy Committee presented to the ONC in July 2009.

For most measures, CMS proposes that EPs and eligible hospitals report a numerator and a denominator; attest to the accuracy of the data; and submit the information through a secured portal. Reporting should include all patients and activities (as defined by the measures), regardless of insurance status or payer.

For those objectives that rely solely on a capability included as part of certified EHR technology, CMS proposes to set higher requirements to demonstrate meaningful use. For example, successful demonstration of an up-to-date problem list means that at least 80 percent of all patients seen by the EP or admitted to the hospital have a documented entry (even if the entry is “none”). When a requirement relies on the electronic exchange of information, such as incorporating lab test results into EHR as structured data, successful demonstration is set at 50 percent.

To qualify for incentives, providers (EPs and eligible hospitals) must report on all of the IT functionality measures, including a requirement to report quality measures to CMS or to the State. (Information about the quality reporting requirements is included below in the “Reporting Quality Measures” section.)

Demonstrating HIT Functionality for Eligible Professionals

Eligible professionals must meet all 25 measures that are listed in the proposed rule (see Appendix A for a list of measures). If an EP practices at more than one site, the reporting should include patients and actions at sites with certified EHR technology. In addition, the EP must have at least 50 percent of his/her encounters at a practice(s)/location(s) equipped with certified EHR technology.

Demonstrating HIT Functionality for Eligible Hospitals

Eligible hospitals must meet all 23 measures that are listed in the proposed rule (see Appendix A for a list of measures).

Analysis: The AAMC is concerned that CMS’s “all or nothing” approach creates a high barrier to achieving meaningful use and will lead to inequitable outcomes for providers that have effectively become meaningful users of EHR technology. We welcome your feedback on each of the proposed meaningful use requirements and note several initial concerns:

- The computerized physician order entry (CPOE) measure has denominators that are not in the electronic record. This requirement adds a new data collection burden. Additionally, this measure does not permit hospitals to count orders entered in an emergency room (POS 23) in the numerator;
- The specifications for reporting are not sufficiently detailed;
- Thresholds for the measures are very high. Additionally, the threshold for some measures may be impossible to meet if the EP or hospital cares for a large uninsured or disadvantaged population; and
- The proposed denominators are based on all patients, not just on Medicare and Medicaid patients.

Reporting Quality Measures (pp 1872-1903)

The ARRA legislation stipulates that EPs and eligible hospitals must report quality measures to receive HIT incentive payments. Due to concerns about CMS’s capacity to accept information from EHRs and the ability for vendors to implement the specifications before 2011 reporting periods, CMS proposes that EPs and eligible hospitals calculate the measures and submit the results including numerator, denominator and exclusions to CMS through attestation. Starting in 2012, if the capacity exists, quality data will be submitted directly through EHRs via one of three proposed reporting options including a CMS-designated portal, Health Information Exchanges

(HIE), or registries. The reporting criteria will satisfy meaningful use for both the Medicare and Medicaid programs.

Quality Reporting Requirements for EPs

CMS is proposing that EPs report on a core set of measures and, in addition, report on a set of specialty-specific measures. The proposed “core” measures apply to a broad range of patients (tobacco use, blood pressure measurement, drugs to be avoided in the elderly). In addition, EPs would select one of the following specialty groups (cardiology, pulmonology, endocrinology, oncology, proceduralist/surgery, primary care, pediatrics, obstetrics/gynecology, neurology, psychiatry, ophthalmology, podiatry, radiology, gastroenterology, nephrology) and report on measures within the selected group. CMS proposed from 3 to 29 measures per group, but expects to narrow the options down to 3 to 5 measures per specialty. The final measures will be selected based on the availability of electronic measure specifications and comments received. CMS is soliciting comments on whether there are EPs to which none of the specialty measure groups would apply. The agency also is interested in circumstances where none of the core measures would be applicable to an EP. In the final rule CMS will identify specialties that will not be required to report on specialty-specific measures, though they will still be required to report on the core measures.

Analysis: The AAMC has several concerns about the EP quality reporting requirements. First, the AAMC is concerned that academic medical centers have many subspecialists with practices for which the specialty measure set may not be relevant. Second, a few of the proposed measures are not endorsed by the National Quality Forum (NQF) and there are many more measures that are not in the Physician Quality Reporting Initiative (PQRI). These measures would be new to most practices. Third, if EHR vendors will not be ready with specifications until 2011, then there is additional burden for EPs to calculate and report measures. We welcome your input on a proposal to defer this reporting to 2012.

Quality Reporting Requirements for Eligible Hospitals

CMS is proposing that eligible hospitals report on a set of 35 inpatient quality measures in the following areas; stroke, venous thromboembolism (VTE), ED throughput, surgical infection prevention, cardiovascular, pneumonia, hospital acquired infections, and readmissions. These measures will apply for those hospitals eligible for the Medicare and Medicaid incentive payments; however, for hospitals interested in the Medicaid incentive and whose patient population does not apply to the previous set of measures, an additional measure set will be available.

Hospitals will be required to submit results on all measures and to provide the numerator, denominator, and exclusions for all patients regardless of payor.

Electronic specifications are currently only available for the stroke, VTE and ED throughput measures. While CMS states that all electronic specifications should be available by April 2010, any measure that is not electronically specified will not be finalized for inclusion in the incentive program.

CMS is soliciting comments on whether or not it is feasible to collect all of the proposed measures for 2011. If not, the agency seeks comment on which measures should be required for 2011, which should be deferred until 2012, and why.

Analysis: The AAMC has several concerns regarding the hospital quality reporting requirements. The sheer number of measures proposed is too extensive for hospitals to implement, and more than half of the proposed measures are not currently specified for EHR implementation. Similarly, the current timeline for implementation of these measures at the hospital level is not long enough, given that proposed specifications will not be released until April.

The AAMC also has concerns regarding the future direction of the quality reporting requirements and wants to ensure a parallel reporting program is not created among the EHR reporting program, the current RHQDAPU program, and any future value-based purchasing programs.

Incentive Payments and Penalties for EPs (page 1907)

ARRA limits the physician incentives to a cap equal to 75 percent of the estimated Medicare allowed charges for covered professional services furnished by the EP during the relevant payment year. As provided in the legislation, the maximum payments are as follows:

- Year 1: \$15,000 (\$18,000 if first payment year is 2011 or 2012)
- Year 2: \$12,000
- Year 3: \$8,000
- Year 4: \$4,000
- Year 5: \$2,000

MACs/carriers will calculate incentive payment amounts for qualifying EPs.

If services are “predominantly” furnished in a health professional shortage area (HPSA), incentive payments are increased by 10 percent. If 50 percent or more of the EP’s Medicare covered professional services are furnished in a HPSA, then the EP has met the “predominantly” requirement. This determination will be made on the basis of the frequency of services provided over a one-year period rather than on the percentage of allowed charges. CMS estimates that 17 percent of EPs will qualify for the HPSA increase, assuming that they meet the other meaningful use requirements.

CMS proposes that the incentives will be paid as a single, consolidated, annual payment. The payment will be made on a rolling basis, as soon as CMS ascertains that an EP has demonstrated meaningful use for the applicable reporting period (90 days for the first year or a calendar year for subsequent years) and reached the threshold for maximum payment.

An EP may reassign the incentive payment to only one employer or entity. If an EP is associated with more than one practice, CMS proposes that the EP must select one tax identification number (TIN) to receive any applicable EHR incentive payment. The incentive payment for a qualifying EP who works solely in a group practice will be paid to the group practice's TIN.

Effective for 2015 and subsequent years, there will be a fee schedule reduction for any EP who is not a meaningful user. The reduction will be 1 percent for 2015; 2 percent for 2016; and 3 percent for 2017 and subsequent years. If “for 2018 and subsequent years the Secretary finds that the proportion of EPs who are meaningful EHR users is less than 75 percent” there will be an additional one percent reduction for all eligible providers. (p 1911) The law also provides for a significant hardship exception that may not be granted for more than 5 years. CMS will propose how to implement this hardship provision in later rulemaking.

While eligible hospitals may receive both Medicare and Medicaid incentives, EPs must make an election to receive only one incentive. CMS proposes that EPs be allowed to change the election once during the life of the EHR incentive program. However, no EP would receive more than the maximum incentive available under Medicaid, which is the higher of the two programs. The last year during which a switch would be permitted is calendar year 2014. (p. 1904)

EPs or group practices that accept a Medicare EHR incentive payment for a given year are not eligible for the MIPAA E-Prescribing Incentive Program payment for that same year. However, an EP who receives a Medicaid EHR incentive payment will be eligible for the Medicare MIPAA E-prescribing incentive program payment.

Analysis: While ARRA allows HHS to provide alternative means of meeting meaningful use for group practices, CMS did not implement this provision and thus did not propose a way for incentives to be paid on this basis. We welcome comments from members about the incentive and penalty proposals.

Incentive Payments and Penalties for Eligible Hospitals (pages 1911 – 1916)

Under the Medicare incentive payment structure, an eligible hospital may receive up to four years of incentive payments, based on the inpatient services the hospital provides. Payments will be made on an interim basis, once a hospital has demonstrated that it is a meaningful EHR user for the relevant payment year. CMS proposes that FIs/MACs use the prior year cost report, Provider Statistical and Reimbursement (PS&R) System data, and other estimates to calculate hospital interim incentive payments. FIs/MACs will then calculate the final incentive payment using actual cost report data, as described below.

Hospital incentive payment will be calculated using the following formula:

$$[(\text{Base Amount} + \text{Discharge Related Amount}) \times \text{Medicare share}] \times \text{Transition Factor}$$

The following definitions will be used as elements of the formula:

- Base Amount: \$2,000,000
- Discharge Related Amount: sum of \$200 for each hospital discharge between 1,150 and 23,000 within 12 month period (i.e. ranging from \$ 0 - \$4,370,200)
- Medicare Share: estimated Medicare inpatient days under Part A (fee-for-service + enrollees under Part C) / estimated total inpatient days adjusted to exclude any charges attributable to charity care
- Charges Attributable to Charity Care: charges reported on Line 19 of the revised version of Worksheet S-10 of the hospital cost report
- Transition Factor:
 - First payment year: 100%
 - Second payment year: 75%
 - Third payment year: 50%
 - Fourth payment year: 25%
 - Any succeeding payment year: 0
 - If a hospital becomes a meaningful user after 2015, the transition factor = 0

For preliminary payment purposes, CMS proposes to use data on discharges, Medicare FFS inpatient bed days, managed care inpatient bed days, total inpatient bed days, and charges for charity care from the hospital fiscal year that ends during the FY prior to the FY that serves as the payment year. Final Medicare incentive payments will be determined at the time of settling the cost report for the hospital FY that ends during the payment year. Thus, for example, for an eligible hospital whose cost reporting year ends June 30, 2011, CMS would use data from the cost reporting period ending June 30, 2010 to determine preliminary incentive payments during FY 2011. Final payments would then be based on data from the settled cost report for the cost reporting period ending June 30, 2011.

Note that CMS intends to use the same methods for counting inpatient bed days for EHR incentive payment purposes as the agency currently uses for making graduate medical education (GME) payments (see Lines 1, 6-9, 10, and 14 in column 4, Worksheet S-3, Part I of the Medicare cost report).

Also note that the effect of excluding charges attributable to charity care in the hospital incentive payment formulas for both Medicare and Medicaid is that hospitals providing greater proportions of charity care will receive higher EHR incentive payments.

As with EPs, penalties for hospitals who do not become meaningful users begin in 2015. Hospitals that do not meet Stage 3 meaningful use requirements by 2015 will see 75 percent of their market-basket update reduced by the following: 33.33 percent for 2015; 66.66 percent for

2016; and 100 percent for 2017 and beyond. Receiving the remaining 25 percent of the market-basket update will depend on successful quality reporting.

Analysis: The AAMC is concerned both about the timing of and the substance of CMS’s proposal regarding the calculation of charity care charges. First, the revised Worksheet S-10 has not been finalized as of the time of this writing, making it difficult to know exactly how the final version of instructions for the new Line 19 will read. If the instructions are finalized as printed on page 1914, the AAMC is concerned that hospitals that give full charity care discounts will be at a disadvantage to those that provide only partial charity care discounts. (The proposed instructions require the hospital to enter “the total initial payment obligation of patients”.) Second, even if the revised Worksheet S-10 is released in the coming weeks, hospitals whose cost reporting period follows a calendar year and who wish to become meaningful users in FY 2011 will not be able to report Worksheet S-10 data for their first EHR incentive reporting year. The AAMC will encourage CMS to establish an alternative method of calculating charity care charges for these hospitals.

Online Posting (pages 1903-1904)

Names of all EPs, eligible hospitals, and critical access hospitals (CAHs) receiving EHR incentive payments will be posted on the CMS website. Eligible hospitals and CAHs will have the opportunity to review the list before it is posted publicly.

Although ARRA allows for reporting at the group practice level, CMS is not proposing to implement this provision, because the agency is not proposing to base incentive payments at the group practice level.

Medicaid Incentives (pages 1928-1948)

Medicaid incentive programs are state specific, but CMS proposes to use similar definitions and methodology, where possible, between the Medicare and Medicaid programs. Note, however, that a state’s participation in the Medicaid EHR incentive program is optional.

Eligible Professionals

For Medicaid incentives, qualifying EPs are defined as physicians, dentists, certified nurse-midwives, nurse practitioners, and physician assistants practicing in an FQHC (federally qualified health center) or RHC (rural health center) that is led by a physician assistant. The EPs cannot be hospital based, a determination made using the same definition as for the Medicare incentive program. However, Medicaid EPs practicing predominantly (i.e., over 50 percent of total patient encounters over a 6 month period) in an FQHC or RHC are not subject to the hospital-based exclusion.

An EP must have at least 30 percent patient volume attributable to Medicaid patients. CMS proposes to measure the percentage based on all patient encounters attributable to Medicaid over any continuous 90-day period within the most recent calendar year. There are two exceptions to the 30 percent rule: (1) a pediatrician must have at least 20 percent of patient volume attributable to Medicaid patients, and (2) a Medicaid EP practicing predominantly in a FQHC or RHC must have at least 30 percent patient volume attributable to “needy individuals.”

To calculate patient volume, the numerator will be the EP’s total number of Medicaid patient encounters in any representative continuous 90-day period in the preceding calendar year. The denominator is all patient encounters for the same individual professional or hospital over the same 90-day period. An annual attestation will be required regarding patient volume thresholds to continue to qualify for Medicaid incentives. Individuals enrolled in Medicaid managed care organizations, prepaid inpatient health plans, or prepaid ambulatory health plans are included in the calculation of patient volume.

“Needy individuals” are those (1) receiving medical assistance from Medicaid or the Children’s Health Insurance Program (CHIP); (2) furnished uncompensated care by the provider; or (3) furnished services at either no cost or reduced cost based on a sliding scale determined by the individual’s ability to pay. When calculating the “needy individual” patient volume for EPs practicing predominantly in FQHCs or RHCs, CMS proposes to eliminate bad debt data. CMS proposes to use the Medicare definition of “bad debt” which is amounts considered to be uncollectible from accounts and notes receivable that were created or acquired in providing services.

Eligible Hospitals

Under ARRA, the only types of hospitals eligible for Medicaid EHR incentive payments are acute care hospitals and children’s hospitals. CMS proposes to define an acute care hospital as a hospital with (1) an average length of patient stay of 25 days or fewer, and (2) a CCN with the last four digits between 0001 and 0879 (i.e. short-term general hospitals and the 11 cancer hospitals). CMS proposes to define children’s hospitals as (1) separately certified institutions, and (2) with a CCN whose last four digits are between 3300 and 3399.

Acute care hospitals’ Medicaid volume must be at least 10 percent of their total volume to be eligible to receive incentive payments. Children’s hospitals of any Medicaid volume are eligible to receive incentive payments.

Meaningful Use for Medicaid

For states that elect to participate in the Medicaid EHR incentive program, the Medicare criteria could become the minimum standard, as CMS proposes to allow states to add additional objectives to the definition of meaningful use, or modify how the existing objectives are measured.

CMS also proposes that hospitals found to be meaningful users under the Medicare incentive payment purposes will be deemed meaningful users for Medicaid incentive payment purposes. CMS explains that if a state adopts additional, CMS-approved meaningful use requirements, hospitals deemed meaningful users by Medicare would not be required to meet the state-specific additional meaningful use requirements to qualify for Medicaid incentive payments. Deemed hospitals, therefore, only need to meet the required Medicaid utilization thresholds to qualify for Medicaid incentives.

Medicaid Incentive Payments, Generally

For providers in states that participate in the Medicaid incentive program, it is possible to qualify for an incentive in CY or FY 2010, through adoption, implementation, or an upgrade of certified EHR technology. (Note that this is one year prior to the earliest incentive payments that may be made under the Medicare program.) In their second payment year, providers who received an incentive for adoption, implementation, or upgrade will be required to follow the same meaningful use criteria as other EPs and hospitals during their first payment year.

State Medicaid incentive payments will be made by calendar year to EPs and by fiscal year to hospitals, which is consistent with the Medicare payment incentives. Under the proposed rule, patient volume requirements for Medicaid incentive payments would be calculated using a “representative” continuous 90-day period in the preceding calendar year.

Medicaid EPs and eligible hospitals must choose only one state from which to receive Medicaid incentive payments. States would then validate to CMS that Medicaid EPs and hospitals meet all of the eligibility criteria.

Payments for Adoption, Implementation, and Upgrade in First Year

CMS is proposing that a provider (EP or hospital) that has already adopted, implemented, or upgraded certified EHR technology and can meet meaningful use criteria in the first incentive payment year will receive the same maximum payments, for the same period of time, as the Medicaid EP who merely adopted, implemented or upgraded certified EHR technology in the first year.

CMS proposes to define “adoption,” “implementation,” and “upgrade” as follows:

- **Adoption:** requires evidence that a provider actually installed the EHR prior to the incentive; efforts to install are not sufficient.
- **Implementation:** the provider has installed and started using certified EHR technology in clinical practice. Implementation activities would include staff training, data entry of patients’ demographic and administrative data, or establishing data exchange agreements and relationships with other providers, such as laboratories, pharmacies, and health information exchanges (HIEs).

- Upgrade: requires the expansion of the functionalities of the EHR, such as the addition of clinical decision support, e-prescribing, or CPOE.

Medicaid Incentives to EPs

There are substantial differences between the Medicare and Medicaid incentive programs in terms of the amount of money that is available and the number of years for which incentives can be received, as shown below:

	Medicare	Medicaid
Eligible professional	Physician, (medicine or osteopathy), dentist, podiatrist, optometrist, chiropractor	Physician, dentist, certified nurse mid-wife, nurse practitioner, physician assistant in RHC or FQHC
Maximum incentive amount	\$44,000	\$63,750
Maximum amount first payment year	\$18,000 (2011-12) \$15,000 (2013) \$12,000 (2014)	\$21,250 (2011-2016)
To earn incentive for first payment year	Must meet all meaningful use criteria	May adopt, implement, or upgrade
Year penalties begin	2015	None
Maximum number of years can receive payment	5	6

Medicaid incentives to eligible providers are based on payments up to 85 percent of net average allowable costs of purchasing and using the EHR technology. Note that receiving funding for EHRs from sources other than state and local governments may reduce the maximum Medicaid incentive payment an EP may receive, if the funding reduces the net average allowable cost below \$25,000 for the first payment year and \$10,000 for each of five subsequent payment years.

A pediatrician who has a Medicaid patient volume of 20 percent, but less than 30 percent, would receive two-thirds of the incentive amount. This would mean a maximum of \$14,167 in the first incentive payment year and \$5,667 in the five subsequent payment years, for a total maximum incentive of \$42,500.

CMS requests comments on an alternative approach that would limit the incentive payment for Medicaid EPs who have already adopted, implemented, or upgraded certified EHR technology to five years of payment at a maximum of \$8500 per year. This approach would result in a maximum incentive of \$42,500 for early adopters.

Medicaid Incentives to Eligible Hospitals

Eligible hospitals may receive EHR incentive payments through both the Medicare and Medicaid programs. Medicaid incentives are calculated using a formula that is identical to that used for Medicare payments, with several exceptions. First, the Medicaid share uses as the numerator the number of inpatient bed days attributable to Medicaid enrollees, taking into account inpatient bed days for individuals enrolled in a Medicaid managed care plan.

Second, because states may pay Medicaid incentive payments to a hospital over a period between three and six years, the Medicaid formula requires an initial calculation of an aggregate EHR incentive payment. This aggregate payment is calculated assuming payments over four years. Discharge data for the first payment year is taken from the hospital fiscal year that ends during the Federal fiscal year prior to the fiscal year that serves as the payment year (as with Medicare incentive payments), but discharges for the three subsequent payment years are calculated using the average annual growth rate for the hospital over the most recent 3 years of available data from an auditable data source. (Note that negative average annual growth rates should be applied as such.) ARRA also requires that (1) in any payment year, no annual Medicaid incentive payment to an eligible hospital may exceed 50 percent of the hospital's aggregate incentive payment, and that (2) over a two-year period, no Medicaid payment to a hospital may exceed 90 percent of the aggregate incentive.

Third, because ARRA does not require a transition factor of zero for Medicaid hospitals whose first payment year is after 2013, hospitals may begin receiving Medicaid incentive payments as late as 2016.

Finally, for Medicaid incentive purposes, CMS permits states to use both the revised Worksheet S-10 "or another auditable data source" to calculate charity care charges.

CMS Impact Analysis (pages 1972 – 1987)

In the EP impact analysis of the rule, CMS created two scenarios related to adoption rate—low and high—and estimated the percent of Medicare EPs who would be meaningful users. To arrive at these estimates, CMS subtracted the number of hospital-based EPs, and EPs who would qualify for and select Medicaid incentives because of the larger payment. Under the low scenario, by 2015, the year in which penalties begin, 21 percent of Medicare EPs would qualify as meaningful users, resulting in \$0.5 billion incentives and \$0.4 billion in penalties. Under the low scenario, by 2019 the percentage of EPs who are meaningful users would rise to 36 percent, and the penalties for that year would be \$1.1 billion (no incentives are paid after 2017). Under the high scenario, 53 percent of Medicare EPs would be meaningful users by 2015, resulting in \$1 billion in incentives and \$0.2 billion in penalties. This scenario estimates that by 2019, 70 percent of EPs will be meaningful users and the penalties will be \$0.5 billion.

For hospitals, CMS's "low scenario" indicated that the Medicare program would pay \$6.6 billion incentive payments from 2009 – 2014, that the program would pay \$8.6 billion from 2009 – 2019, and that CMS would collect \$1.1 billion in penalties from 2015 – 2019. The "high

scenario” for hospitals indicated that the Medicare program would pay \$9.8 billion in incentive payments from 2009 – 2014, that the program would pay \$11.6 billion from 2009 – 2019, and that CMS would collect \$ 0.2 billion in penalties from 2015-2019. CMS also provided tables that predict the percentage of hospitals that will adopt certified EHRs by year, based on how much of the hospital EHR system costs are covered by the Medicare incentive payments. For example, CMS predicts that in 2011, 20 percent of hospitals under the low scenario, and 30 percent of hospitals under the high scenario will adopt certified EHRs if their Medicare incentives cover 50 – 75 percent of their costs.

ONC Interim Final Rule, Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology

In developing its interim final regulation (IFR), the ONC relied heavily on input from the HIT Policy Committee, which helped to shape the standards and certification criteria. (To review the HIT Policy Committee’s documents and proceedings, see the Policy Committee’s website at http://healthit.hhs.gov/portal/server.pt?open=512&objID=1269&parentname=CommunityPage&parentid=1&mode=2&in_hi_userid=10741&cached=true.) The IFR takes effect on February 12, 2010, but ONC welcomes comments and has indicated a willingness to make revisions.

Certification Criteria for Electronic Health Records

The certification criteria and standards are tightly coupled with CMS’s proposed meaningful use criteria. The principles undergirding the IFR are to provide a level of assurance for providers that their EHRs will allow them to meet meaningful use criteria and to provide a pathway for providers and vendors to move forward. This pathway builds on current IT capabilities and identifies gaps where future work is required to reach the meaningful use objectives.

In the IFR, the ONC proposes a definition of a certified EHR that allows providers the flexibility to choose complete EHRs or combinations of EHR modules. For example, providers may install a vendor product for patient records but choose a subscription service for e-prescribing. There is no requirement for certification of combinations of EHR module; rather, it will be the provider’s responsibility to determine whether the combination of modules that are selected meet all of the applicable certification criteria.

The proposed rule also includes administrative transactions and privacy and security criteria that are aligned with applicable HIPAA requirements. ONC anticipates this will assist providers with overall privacy and security and may streamline federal and state compliance. However this also means some compliance timeframes will vary due to current regulatory requirements. For example, the Secretary currently permits the use of two versions of the ASC X12N and NCPDP standards until December 31, 2011, at which point only the most recently adopted HIPAA transactions standards will be permitted. Unlike the effective date for ICD-10-CM and ICD-10-PCS, which is set for October 1 2013, placing compliance within meaningful use Stage 2, the 5010 and D.0 HIPAA transaction standards are required to be used in the second year of meaningful use Stage 1.

As noted above, no certification organizations have yet been named, as this is the subject of a separate, upcoming ONC rulemaking.

Analysis: There are approximately 25 functionalities required to achieve meaningful use, Stage 1. Meeting each of these functionality criteria will require major organizational commitments of vast resources over the next five years and beyond.

Standards

The IFR standards are organized into four categories. Although some standards currently indicated that “none” or “any” code set may be used in Stage 1 (2011) the Stage 2 (2013) candidate standards indicate ONC’s planned path toward a single, structured data standard. For example, the medication allergy list requirement currently indicates that no standard has yet been adopted, but ONC proposes to use UNII as a candidate standard for Stage 2. (See Appendices B, C, and D below for a summary of the standards in the IFR.)

The IFR standards are organized into the following four categories:

- Content Exchange: standards currently available in most areas and candidate standards on the horizon
- Vocabulary Standards: adopts several current standards, with vital signs, unit of measure, and medication allergies left open until 2013
- Transport Standards: include both REST and SOAP common exchange formats
- Security and Privacy Standards: adopts standards where best practices and requirements exist and leaves open standards where the industry will continue to innovate

ONC attempted to provide flexibility that takes into account the evolving market. For example with content exchange, the IFR allows *either* for a continuity of care document (CCD) or a continuity of care record (CCR), two widely used clinical documentation standards for patient summaries developed by two different organizations. In other areas, ONC was more prescriptive about standards specific to healthcare, such as laboratory data reporting to public health agencies and the use of LOINC as an adopted vocabulary standard. For standards that applied more broadly, such as identity authentication of those involved in a health information transaction, ONC described only the function to allow innovation.

ONC is seeking comments on the following:

- The approach and the availability of voluntary consensus standards that may be viable alternatives to any of the non-voluntary consensus standards adopted;
- Alternatives to HL7 Clinical Document Architecture (CDA) and the ASTM Clinical Care Record for the patient summary record, and the HIT industry’s readiness to move to a single standard;

- The selected standard to populate medication list information as being any codes set by an RXNorm drug data source provider that is identified by the National Library of Medicine;
- Whether there are in fact implementation specifications that are industry-tested and would not present a significant burden if adopted;
- Implementation, feasibility, maturity and prevalence in the industry of candidate standards for Stage 2;
- The feasibility of recording additional elements, such as reason for disclosure, to whom the disclosure was made, and other elements of information about a disclosure; and
- The cost-benefit analysis and underlying assumptions. For example, the analysis only focuses on the direct effect of the IFR on commercial vendors, open source developers, and relevant Federal agencies, and does not include eligible providers.

Analysis: Where the ONC has aligned standards with current or planned federal requirements, most organizations will be well-prepared. Many of the standards have been left open for 2011, because they are not widely adopted and would present a burden to providers. RxNorm is not a consensus standard, however, and we anticipate that providers will continue to use proprietary standards and map to RxNorm for several years.

There is some contention over the use of either ICD-10 or SNOMED CT, the former being used for administrative transactions and the latter designed to capture clinical observations. We welcome your input on this issue.

CPT-4 is the only vocabulary standard that requires payment for use. We welcome your feedback as to whether HHS should treat licensing for this similarly to its approach with SNOMED CT, to reduce implementation burden.

Finally, QRDA is an emerging standard that is not widely implemented. This may present a burden as organizations move from PQRI XML to QRDA.

APPENDIX A: HIT FUNCTIONALITY MEASURES

Measures for Stage 1 Meaningful Use for Eligible Professionals (EP) and Hospitals (Based on Table 2 of Federal Register, pp. 1867-1870)

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
1	Use CPOE	CPOE is used for at least 80 percent of all orders	1	Use of CPOE for orders (any type) directly entered by authorizing provider (for example, MD, DO, RN, PA, NP)	CPOE is used for at least 10 percent of all orders
2	Implement drug-drug, drug-allergy, drug-formulary checks	The EP has enabled this functionality	2	Implement drug-drug, drug-allergy, drug-formulary checks	The eligible hospital has enabled this functionality
3	Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT®	At least 80 percent of all unique patients seen by the EP have at least one entry or an indication of none recorded as structured data.	3	Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT®	At least 80 percent of all unique patients admitted to the eligible hospital have at least one entry or an indication of none recorded as structured data.
4	Generate and transmit permissible prescriptions electronically (eRx).	At least 75 percent of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology.		N/A	

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
 Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
5	Maintain active medication list.	At least 80 percent of all unique patients seen by the EP have at least one entry (or an indication of “none” if the patient is not currently prescribed any medication) recorded as structured data.	4	Maintain active medication list.	At least 80 percent of all unique patients admitted by the eligible hospital have at least one entry (or an indication of “none” if the patient is not currently prescribed any medication) recorded as structured data.
6	Maintain active medication allergy list.	At least 80 percent of all unique patients seen by the EP have at least one entry (or an indication of “none” if the patient has no medication allergies) recorded as structured data.	5	Maintain active medication allergy list.	At least 80 percent of all unique patients admitted to the eligible hospital have at least one entry (or an indication of “none” if the patient has no medication allergies) recorded as structured data.
7	Record demographics (preferred language, insurance type, gender, race, ethnicity, date of birth).	At least 80 percent of all unique patients seen by the EP have demographics recorded as structured data	6	Record demographics (preferred language, insurance type, gender, race, ethnicity, date of birth, date and cause of death in the event of mortality).	At least 80 percent of all unique patients admitted to the eligible hospital have demographics recorded as structured data
8	Record and chart changes in vital signs.	For at least 80 percent of all unique patients age 2 and over seen by the EP, record blood pressure and BMI; additionally, plot growth chart for children age 2 to 20.	7	Record and chart changes in vital signs.	For at least 80 percent of all unique patients age 2 and over admitted to the eligible hospital, record blood pressure and BMI; additionally, plot growth chart for children age 2 to 20.

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
9	Record smoking status for patients 13 years old or older	At least 80 percent of all unique patients 13 years old or older seen by the EP have “smoking status” recorded	8	Record smoking status for patients 13 years old or older	At least 80 percent of all unique patients 13 years old or older admitted to the eligible hospital have “smoking status” recorded
10	Incorporate clinical lab-test results into EHR as structured data.	At least 50 percent of all clinical lab tests results ordered by the EP during the EHR reporting period whose results are in either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.	9	Incorporate clinical lab-test results into EHR as structured data.	At least 50 percent of all clinical lab tests results ordered by an authorized provider of the eligible hospital during the EHR reporting period whose results are in either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.
11	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, and outreach.	Generate at least one report listing patients of the EP with a specific condition.	10	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, and outreach.	Generate at least one report listing patients of the eligible hospital with a specific condition.
12	Report ambulatory quality measures to CMS or the States	For 2011, an EP would provide the aggregate numerator and denominator through attestation. For 2012, electronically submit the measures	11	Report hospital quality measures to CMS or the States.	For 2011, an eligible hospital would provide the aggregate numerator and denominator through attestation For 2012, electronically submit the measures

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
13	Send reminders to patients per patient preference for preventive/ follow-up care	Reminder sent to at least 50 percent of all unique patients seen by the EP that are 50 and over		N/A	
14	Implement five clinical decision support rules relevant to specialty or high clinical priority, including for diagnostic test ordering, along with the ability to track compliance with those rules	Implement five clinical decision support rules relevant to the clinical quality metrics the EP reports.	12	Implement five clinical decision support rules relevant to specialty or high clinical priority, including for diagnostic test ordering, along with the ability to track compliance with those rules	Implement five clinical decision support rules relevant to the clinical quality metrics the Eligible Hospital reports.
15	Check insurance eligibility electronically from public and private payers	Insurance eligibility checked electronically for at least 80 percent of all unique patients seen by the EP.	13	Check insurance eligibility electronically from public and private payers	Insurance eligibility checked electronically for at least 80 percent of all unique patients admitted to an eligible hospital.
16	Submit claims electronically to public and private payers.	At least 80 percent of all claims filed electronically by the EP.	14	Submit claims electronically to public and private payers.	At least 80 percent of all claims filed electronically by the eligible hospital.

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
17	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, and allergies) upon request	At least 80 percent of all patients who request an electronic copy of their health information are provided it within 48 hours.	15	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies, discharge summary, and procedures), upon request.	At least 80 percent of all patients who request an electronic copy of their health information are provided it within 48 hours.
	N/A		16	Provide patients with an electronic copy of their discharge instructions and procedures at time of discharge, upon request.	At least 80 percent of all patients who are discharged from an eligible hospital and who request an electronic copy of their discharge instructions and procedures are provided it.
18	Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, allergies)	At least 10 percent of all unique patients seen by the EP are provided timely electronic access to their health information		N/A	
19	Provide clinical summaries to patients for each office visit.	Clinical summaries provided to patients for at least 80 percent of all office visits.		N/A	

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
20	Capability to exchange key clinical information (for example, problem list, medication list, allergies, and 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.	17	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, allergies, diagnostic test results), among providers of care and patient authorized entities electronically.	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.
21	Perform medication reconciliation at relevant encounters and each transition of care.	Perform medication reconciliation for at least 80 percent of relevant encounters and transitions of care.	18	Perform medication reconciliation at relevant encounters and each transition of care.	Perform medication reconciliation for at least 80 percent of relevant encounters and transitions of care.
22	Provide summary care record for each transition of care and referral.	Provide summary of care record for at least 80 percent of transitions of care and referrals.	19	Provide summary care record for each transition of care and referral.	Provide summary of care record for at least 80 percent of transitions of care and referrals.
23	Capability to submit electronic data to immunization registries and actual submission where required and accepted.	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries.	20	Capability to submit electronic data to immunization registries and actual submission where required and accepted.	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries.

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

Eligible Professionals			Eligible Hospitals		
#	Objective	Measure	#	Objective	Measure
	N/A		21	Capability to provide electronic submission of reportable lab results to public health agencies and actual submission where it can be received.	Performed at least one test of certified EHR technology capacity to provide electronic submission of reportable lab results to public health agencies (unless none of the public health agencies to which eligible hospital submits such information have the capacity to receive the information electronically).
24	Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies (unless none of the public health agencies to which an EP or eligible hospital submits such information have the capacity to receive the information electronically).	22	Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies (unless none of the public health agencies to which an EP or eligible hospital submits such information have the capacity to receive the information electronically).
25	Protect electronic health information maintained using certified EHR technology through the implementation of appropriate technical capabilities.	Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308 (a)(1) and implement security updates as necessary.	23	Protect electronic health information maintained using certified EHR technology through the implementation of appropriate technical capabilities.	Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308 (a)(1) and implement security updates as necessary.

N/A = Objectives/measures not applicable to Eligible Professionals or Eligible Hospitals
Numbers for the objectives and measures were added by AAMC and are not referenced explicitly in the rule.

APPENDIX B: CONTENT EXCHANGE STANDARDS

Purpose	Adopted Standards Stage 1/2011	Candidate Standards Stage 2/2013
Patient summary	CCD or CCR	Alternatives expected to be narrowed based on HIT Stds Committee recommendations
E-prescribing	NCPDP SCRIPT 8.1/10.6	NCPDP SCRIPT 10.6
Lab data reporting to public health agencies	HL7 2.5.1	Potentially newer versions, based on HIT Stds Cmte Recommendations
Administrative transactions	X12 4010A1 and NCPDP 5.1 and CAQH CORE	X12 5010 and NCPDP D.0 and CAQH CORE
Public Health Surveillance and Reporting	HL7 2.3.1., HL7 2.5.1	Potentially newer versions, based on HIT Stds Cmte recommendations
Immunization Reporting to registries	HL7 2.3.1, HL7 2.5.1	Potentially newer versions, based on HIT Stds Cmte recommendations
Quality Reporting	CMS PQRI	CMS CDA and respective template library specifications

APPENDIX C: VOCABULARY STANDARDS

Purpose	Adopted Standard Stage 1/2011	Candidate Standard Stage 2/2013
Problem List	SNOMED CT or ICD-9	SNOMED CT or ICD-10
Procedures	CPT-4 or ICD-9	CPT-4 or ICD-10
Vital Signs	No specific standard specified	CDA template
Units of Measure	No specific standard specified	UCUM
Medication Allergies	No specific standard specified	UNII
Medication Lists	Any code set by an RxNorm drug data source provider that is identified by NLM as being a complete data set integrated within RxNorm	RxNorm
Lab Orders and Results	Ability to accept LOINC codes	LOINC
Electronic Prescribing	Any code set by an RxNorm drug data source provider that is identified by NLM as being a complete data set integrated within RxNorm	RxNorm
Public Health Surveillance or Reporting	According to applicable public health agency requirements	GISPE or according to applicable public health agency requirements
Immunizations	CVX	CVX

APPENDIX D: TRANSPORT, SECURITY, AND PRIVACY STANDARDS

Purpose	Adopted Standard Stage 1/2011	Candidate Standard Stage 2/2013
Transport	REST or SOAP	Future standards TBD by HIT Stds Committee
Encryption and Decryption of Electronic Health Information at Rest	A symmetric 128 bit fixed-block cipher algorithm capable of using a 128, 192, or 256 bit encryption key must be used (e.g., FIPS 197 Advanced Encryption Standard, (AES), Nov 2001).	Future standards TBD by HIT Stds Committee
Encryption and Decryption of Electronic Health Information for Exchange	An encrypted and integrity protected link must be implemented (e.g., TLS, IPv6, IPv4 with IPsec).	Future standards TBD by HIT Stds Committee
Record and Examine Activity in Information Systems that Contain or Use Electronic Health Information (audit log)	The date, time, patient identification (name or number), and user identification (name or number) must be recorded when electronic health information is created, modified, deleted, or printed. An indication of which action(s) occurred must also be recorded (e.g., modification).	
Corroborate that Electronic Health Information Has Not Been Altered or Destroyed in Transit	A secure hashing algorithm must be used to verify that electronic health information has not been altered in transit. The secure hash algorithm used must be SHA-1 or higher (e.g., Federal Information Processing Standards (FIPS) Publication (PUB) Secure Hash Standard (SHS) FIPS PUB 180-3).	Future standards TBD by HIT Stds Committee
Authentication	Use of a cross-enterprise secure transaction that contains sufficient identity information such that the receiver can make access control decisions and produce detailed and accurate security audit trails (e.g., IHE Cross Enterprise User Assertion (XUA) with SAML identity assertions).	Future standards TBD by HIT Stds Committee
Record Treatment, Payment, and Health Care Operations Disclosures	The date, time, patient identification (name or number), user identification (name or number), and a description of the disclosure	Future standards TBD by HIT Stds Committee

	must be recorded.	
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