An Overview of Final Regulations Implementing HITECH's Meaningful Use Provisions and their Implications for Regional Collaboratives

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November 2010

Introduction

On July 13, 2010, the United States Department of Health and Human Services (HHS) Centers for Medicare and Medicaid Services (CMS) published final regulations implementing specific provisions of the Health Information Technology for Economic and Clinical Health (HITECH) Act,[1] enacted as part of the American Recovery and Reinvestment Act of 2009 (ARRA).[2] Title IV of Division B of ARRA (containing the HITECH provisions) authorizes creation of an infrastructure to promote the nationwide adoption and use of health information technology (HIT) through incentive payments for Medicare and Medicaid providers who become "meaningful users" of certified electronic health records (EHR) technology.[3]

This analysis and the accompanying tables describe the major provisions of the EHR incentive programs as clarified by the final rule, particularly the definition of meaningful use and its implications for the alliances in Robert Wood Johnson Foundation's Aligning Forces for Quality program as well as other regional health care collaboratives.

An Overview of the HITECH Legislation

HITECH establishes the Office of the National Coordinator of Health Information Technology (ONC), empowers the office to invest in an HIT infrastructure and set national HIT policy, and directs the secretary of HHS, acting through ONC and CMS, to implement HITECH's provisions related to payment of Medicare and Medicaid financial incentives to eligible health care providers who are meaningful users of certified EHRs.[4] HITECH recognizes two types of "eligible providers": health professionals and hospitals. "Eligible hospitals" may receive apportioned incentive payments under both Medicare and Medicaid, but "eligible professionals" (EPs) must choose one program in which to participate.

Medicare Payments

For eligible providers who are "meaningful EHR user[s]" (called "qualified providers"[5]), the statute authorizes Medicare payments in addition to the reimbursement rate for services for up to five

years,[6] followed by penalties in the case of participating providers who fail to become meaningful EHR user[s].[7] Eligible providers, for purposes of the Medicare incentive program, include individual health care professionals (EPs), acute care hospitals and critical access hospitals (CAHs).

Health Care Professionals

Under Medicare, the term "eligible professionals" includes the following five types of non-hospital-based physicians: doctors of medicine or osteopathy; doctors of dental surgery or dental medicine; doctors of podiatric medicine; doctors of optometry; and chiropractors.[8] Although HITECH's definition originally excluded a "hospital-based eligible professional . . . who furnishes substantially all of such services in a hospital setting (whether inpatient or outpatient),"[9] subsequent legislation revised the definition to only exclude physicians who provide services "in a hospital inpatient or emergency department (ED) setting."[10] Thus, physicians who practice in hospital outpatient settings are eligible for Medicare incentive payments.

As stand-alone clinical care entities, Federally Qualified Health Centers (FQHC) and Rural Health Clinics (RHC) are not included in the Medicare incentive program; however, EPs working in FQHCs and RHCs are eligible to participate to the extent they are paid in accordance with Medicare's Resource Based Relative Value Scale (RBRVS) formula (i.e., fee-for-service).

The law provides that if a Medicare EP is a meaningful EHR user of certified EHR technology, the EP may receive an incentive payment equal to 75 percent of estimated Medicare Part B charges, subject to an annual limit,[11] with higher limits for EPs practicing in health professional shortage areas.[12] The law entitles EPs to incentive payments beginning in 2011 for up to five years (until 2016) but must become a meaningful user before 2015 in order to receive an incentive.[13] The legislation further provides that the amount of the annual limit for any given EP depends on when the first incentive payment was received, up to a maximum of $44,000 for any individual EP.[14] After the incentives expire in 2016, the penalties take effect. If an EP is not a meaningful EHR user of certified EHR technology by 2015, then Medicare Part B payments will be reduced by a specified percentage of up to 3 percent of amounts otherwise due[15] unless an EP qualifies for a "significant hardship" exception.[16]

Medicare Hospitals

Medicare "eligible hospitals" are defined as "subsection (d) hospitals" referring to the definition of that term in Section 1886(d)(1)(B) of the Social Security Act.[17] A subsection (d) hospital includes acute care hospitals located in one of the 50 states or the District of Columbia, including Maryland hospitals paid under an alternative, all-payer rate setting structure. The law excludes hospitals in the territories as well as hospitals and hospital units that are not paid under the Inpatient Prospective Payment System (IPPS)[18] including psychiatric, rehabilitation, long term care, children's and cancer hospitals. Hospitals considered eligible hospitals will be identified using their CMS Certification Number (CCN), the provider identifier used for cost reporting purposes, meaning that multi-campus hospitals organized under the same provider number will be treated as one hospital for purposes of identification and calculation of incentive payments. (Commenters expressed concerns that this approach disadvantages large hospital systems operating under a single provider number, but CMS maintained use of the CCN in the final rule).[19] Critical Access Hospitals (CAHs) that have

been certified under Section 1820(c) of the Act are also eligible to participate in the Medicare incentive program and will be similarly identified using their CCN.[20]

Medicare eligible hospitals are entitled to receive up to four years of incentive payments beginning in FY 2011 and will be subject to penalties in subsequent years if they fail to become meaningful EHR users by FY 2015.[21] No incentive payments will be made after FY 2016.

The incentive payment for eligible hospitals is calculated using a complex formula based partly on the hospital's number of Medicare inpatient bed days. The payment amount reflects the product of (1) an initial base amount ($2 million) plus a per-discharge payment amount; (2) the Medicare proportional share of inpatient days, adjusted to reward hospitals that experience higher volumes of uncompensated care;[22] and (3) a transition factor that phases down in the later stages of the incentive program.[23] Eligible hospitals that fail to become meaningful users of certified EHR technology by FY 2015 will be subject to a one-third to three-quarter reduction in their IPPS market basket updates.[24]

The statute also provides that CAHs receive an incentive payment equal to the product of 1) the reasonable costs incurred for the purchase of certified EHR technology in that cost reporting period and any other similarly incurred costs to the extent that they have not fully depreciated, and 2) the CAH's Medicare share equal to the Medicare share as computed for eligible hospitals.[25] Thus, unlike other hospitals, CAHs qualify for incentives that cover not only use but also acquisition costs.

Medicare Advantage

Medicare Advantage (MA) organizations are also eligible for identical incentive payments for meaningful user affiliated EPs[26] and eligible hospitals.[27] No MA incentive payments may be made after 2016.[28] The MA payment system is targeted predominantly at EPs employed by MA organizations or entities that furnish 80 percent of their Medicare patient care services to MA enrollees.[29]

Medicaid Payments

For Medicaid providers, the law provides financial incentives in the form of both meaningful use payments[30] and start-up financing to help providers adopt, implement, or upgrade (AIU) the necessary certified EHR technology.[31] There are no penalties for Medicaid providers who do not become meaningful users.

Health Care Professionals

The statute defines a Medicaid EP as a physician, dentist, certified nurse-midwife, nurse practitioner, or a physician assistant practicing in a FQHC (e.g., a community health center) or RHC that is also led by a physician assistant.[32] The law specifies that at least 30 percent of a Medicaid EP's patient volume must be attributable to Medicaid patients, unless the EP is a pediatrician or practices "predominately" in a FQHC or RHC.[33] Pediatricians may be eligible for incentive payments if at least 20 percent of their patient volume is attributable to Medicaid patients, and EPs practicing predominately (defined as professionals for whom the FQHC or RHC represents the clinical location for over 50% of the EP's patient encounters over a six-month period) are eligible if at least

30 percent of their patient volume is attributable to "needy individuals."[34] The term needy individuals encompasses both Medicaid insured and uninsured patients.

The law excludes many types of providers who may be a significant source of Medicaid patient treatment, including certain behavioral health providers (including clinical psychologists, clinical case workers, and social workers) and post-acute, long term care, and home health care providers. While the law recognizes chiropractors for Medicare purposes, it does not do so for Medicaid purposes.

Unlike hospitals, which may participate in both Medicare and Medicaid (with payments apportioned between the two programs in proportion to the patients they serve), EPs who qualify under both programs must choose to receive incentive payments from either Medicare or Medicaid, but not both.[35] Thus, EPs that are high-Medicaid providers but have relatively low Medicare patient volume[36] presumably will select Medicaid as the source of their incentive payments.

Furthermore, the Medicare incentives program is aimed at providers paid in accordance with Medicare's RBRVS formula. By contrast, both FQHCs and RHCs are paid in accordance with a special, cost-related prospective payment system (PPS), and their clinical staff are either staff members or contract employees who are not paid directly. Therefore, these classes of health care providers will be unable to participate in the Medicare incentive programs and will have only the Medicaid incentive program as an option to support their adoption and meaningful use of HIT.

The law permits Medicaid EPs to receive incentive payments consisting of 85 percent of the costs of adopting, implementing or upgrading certified EHR technology, up to $21,500 for the first year and $8,500 for each subsequent year, up to six years total. The total amount of incentive payments over the six-year period is capped at varying levels based on the type of provider. After the first year's start-up funding, the EP must demonstrate "meaningful use of certified EHR technology" in order to receive the incentive payment.

Hospitals

The law defines Medicaid eligible hospitals as children's hospitals with any Medicaid patient volume and acute care non-children's hospitals with at least a 10 percent Medicaid patient volume.[37] The final rule also includes CAHs and cancer hospitals in the definition of acute care hospitals provided they meet the Medicaid patient volume requirements. An eligible acute care hospital or children's hospital may qualify for incentive payments paid over a period of three to six years, and based on an aggregate EHR hospital incentive amount (sum of four years of a base amount, plus a discharge-related amount, multiplied by a transition amount, divided by the Medicaid share).[38] As with the Medicare formula, the statutory hospital payment formula favors hospitals that provide a higher proportion of uncompensated care.

Hospitals must first adopt or use certified EHR technology before CY 2016 in order to qualify for an incentive payment, but there is no downward payment adjustment for hospitals that fail to adopt and use certified EHR technology.[39]

The Proposed and Final Rules

Many aspects of the incentive programs established by the HITECH Act required subsequent regulatory clarification by CMS, such as: Which health care providers within the categories established by HITECH are eligible to receive incentive payments? What EHR technology will be certified and under what standards? What do providers have to do to be considered meaningful users? This last question was the most critical to answer, since the incentive payments are based on successful demonstration of meaningful use. HITECH defined meaningful use broadly using three criteria: 1) use of certified EHR technology in a meaningful manner; (2) certified EHR technology connected in a manner that provides electronic exchange of information; and (3) use of the certified EHR technology to submit information on quality measures.[40] The statute left the details for achieving these criteria to the secretary of HHS to define, requiring only that the secretary "seek to improve the use of electronic health records and health care quality over time by requiring more stringent measures of meaningful use."[41]

On January 13, 2010, ONC and CMS concurrently published proposed regulations to implement the Medicare and Medicaid EHR incentive programs.[42] On July 13, 2010, final rules were published, incorporating over 2,000 comments.[43] The ONC regulations specify the technical capabilities that EHRs and EHR modules must have to be considered "certified EHR technology."[44] The CMS regulations on which we focus in this paper define the specific criteria Medicare and Medicaid providers must satisfy in 2011 and 2012 in order to be meaningful users.[45] Subsequent CMS rulemaking will address additional meaningful use requirements for 2013 and beyond.

The proposed rule set a high bar for providers attempting to demonstrate meaningful use. Guided by HITECH's three-part test of meaningful use, CMS proposed an increasingly demanding, staged approach to the definition of meaningful use to enable EPs and eligible hospitals to qualify for incentive payments as the infrastructure for certified EHRs develops.[46] Stage 1 meaningful use criteria primarily address the capture of health information.[47] Stage 2 meaningful use criteria, to be proposed by the end of 2011, would expand upon the initial criteria to include more robust requirements for health information exchange, including 1) continuous quality improvement at the point of care and 2) structured information exchange such as electronic transmission of orders entered using computerized provider order entry (CPOE) and electronic transmission of diagnostic test results.[48] Stage 3 meaningful use criteria, to be proposed by the end of 2013, would make the measure of meaningful use more robust by adding criteria that focus on quality, safety and efficiency improvements, decision support for national high priority conditions, patient access to self management tools, and access to comprehensive patient data and improving population health.[49]

While the proposed rule only addressed Stage 1 measures, it included a large number of required meaningful use measures, including measures for clinical quality reporting, with no flexibility for providers to select relevant measures. It also required high rates of compliance for meeting these measures, again with no flexibility. The only area in which the proposed rule offered any flexibility was for state Medicaid programs, allowing the use of different or additional measures relevant to a given state's Medicaid population. Commenters voiced significant concerns that the proposed rule included too many required measures and that the compliance rates for the proposed measures were too rigid and unattainable.

In the final rule, CMS acknowledged these concerns. While CMS retained the three-stage approach, it reduced the number of required measures, lowered the compliance thresholds for satisfying measures, and introduced greater flexibility by dividing the measures into a required "core set" and a more flexible "menu set." It did not, however, maintain the proposed autonomy for state Medicaid programs, favoring instead a more uniform approach across the Medicare and Medicaid incentive programs. A table summarizing the changes from the proposed to final rule, several of which are also highlighted below, is attached as Appendix 1.

Required Meaningful Use Criteria and Quality Measures

The proposed rule required EPs and hospitals to meet ALL meaningful use reporting requirements – 25 for EPs and 23 for hospitals. The final rule adds increased flexibility by designating core criteria that all EPs and hospitals must meet to qualify for incentive payments, while also allowing provider choice among a menu set of additional criteria.[50] The overall reporting burden was slightly reduced, as EPs now must meet 20 criteria and hospitals must meet 19.

One significant change for both EPs and hospitals is that the proposed rule would have required them to implement five "clinical decision support rules relevant to specialty or high clinical priority, including diagnostic test ordering, along with the ability to track compliance."[51] In the final rule, both EPs and hospitals are only required to implement one clinical decision support rule.[52] Another significant change is that the requirement that at least 80 percent of all claims be filed electronically was eliminated, at least for Stage 1 meaningful use.[53] Several measures that had been required in the proposed rule became part of the menu set criteria, so providers will elect to report some but not all of those measures. Examples of requirements that became optional menu set criteria are generating lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach, and incorporating clinical lab test results into a certified EHR as structured data.[54] A table showing the final meaningful use objectives and associated measures for both EPs and eligible hospitals is attached as Appendix 2.

Medicare EPs

Meaningful Use Objectives for Stage 1:

All EPs must meet 15 core objectives and accompanying performance measures, in addition to five more selected from a list of 10 in the EP menu set (for a total of 20).[55]

Clinical Quality Measures:

Under the proposed rule, Medicare EPs had to satisfy all four measures in a core set of clinical quality measures plus a set of clinical quality measures applicable to the provider's specialty. Under the final rule, Medicare EPs must report on three required core clinical quality measures (blood pressure measurement, tobacco use assessment and intervention if necessary, and adult weight screening and follow-up), as well as report on three additional measures from a set list of 38 (for a total of six), without regard to payer. If one of these core measures is not applicable to the EP's scope of practice, the EP must substitute a measure from the alternate core set of measures. In addition to the three core measures, EPs must report on three additional measures from their relevant practice area from the list of 38 practice-specific clinical quality measures. This is a

reduction in the total number of clinical quality measures given by CMS as options, down from 90 measures in the proposed rule. However, CMS is likely to include the proposed measures that were dropped for the Stage 1 final rule in subsequent stages.

Medicare Hospitals

Meaningful Use Objectives for Stage 1:

In the proposed rule, CMS proposed to require eligible Medicare hospitals to meet all of the 23 objectives/measures set forth in the rule in order to qualify for Medicare incentive payments. The final rule provides greater flexibility by designating a core set of objectives and accompanying performance measures with a menu set of additional objectives/measures.[56] Specifically, eligible hospitals must meet 14 core objectives and accompanying performance measures, plus five more selected from a list of ten in the eligible hospital menu set (for a total of 19) for Stage 1.[57] In addition, CMS included compliance exclusions such that if a certain objective/measure is not applicable during a given reporting period, the eligible hospital or CAH may indicate that the objective/measure does not apply and if CMS approves the exclusion, will have one less objective to meet to achieve meaningful use for that period rather than being completely excluded from participation.[58]

Clinical Quality Measures:

In addition to the meaningful use measures (organized by objective and associated measure), eligible hospitals must also report on a set of clinical quality measures in order to qualify as meaningful users of EHR technology. In the proposed rule, CMS proposed a list of 35 clinical quality measures. However, commenters raised concerns related to the burden of reporting and unnecessary duplication with the Reporting Hospital Quality Data for the Annual Payment Update (RHQDAPU) program, lack of availability of technology with the capability to capture information for these measures, and the lack of electronic measure specifications for many of these measures. The final rule includes a list of 15 clinical quality measures and requires reporting only to the extent the eligible hospital has an applicable clinical case without regard to payer.[59] Importantly, the final rule only includes those measures for which electronic specifications are currently available.[60] In an effort to avoid duplication, none of the selected measures overlap with the RHQDAPU program.[61] Finally, the final rule does not include the eight alternate Medicaid-specific clinical quality measures that had been proposed. Rather, hospitals and CAHs that successfully report the quality measures for the Medicare program will also qualify for the Medicaid program incentives.[62]

Increased Flexibility and Reduced Reporting Burden

Attestation Methodology

In the first year of these incentive programs, EPs and hospitals simply attest (subject to review) that they have met the criteria for meaningful use. From 2012 on, providers and hospitals will continue to attest that they have met the meaningful use objectives but will have to submit data to meet the clinical quality measures, which will be expanded for Stages 2 and 3.[63]

Core Set and Menu Set Objectives and Measures

As discussed above, CMS changed from a large single set of required meaningful use objectives and measures to a smaller core set and menu set of measures. This approach was supported by the HIT Policy Committee and MedPAC.[64] The menu set gives providers flexibility to select measures that are appropriate for their scope of practice. The core set ensures that the providers demonstrate the critical functions on which future objectives and measures will depend and incentive programs accomplish HITECH's goal of meaningful use.

Denominators for Percentage-based Measures

A significant concern of commenters was that the use of percentage-based measures (as opposed to simple counts) would be too burdensome on providers because it would require the providers to count all patient encounters of a certain characteristic in order to calculate the appropriate denominator. For example, in order to calculate the percent of prescriptions transmitted electronically, the provider would have to count the total number of prescriptions written, including those not transmitted electronically, to arrive at the denominator. This could require manual chart review to determine how many prescriptions were written but not reflected in the patient's EHR.

CMS resolved this issue with a compromise approach, basing the denominator for a selection of measures on the subset of patients whose information is captured electronically. The goal was to eliminate the need for any manual chart review. For other measures, the denominator remains all patients who meet the criteria for that measure.

Exclusions

In the proposed rule, CMS solicited comment on whether certain providers would find that some of the meaningful use measures were inapplicable based on their scope of practice. For example, chiropractors do not prescribe drugs and therefore would not be able to satisfy the e-prescribing measure. It is also possible that providers will have no applicable cases for a given measure; for example, if no patients request a copy of their health information, the provider would have nothing to report for the objective to "provide patients with an electronic copy of their health information." To address these and similar circumstances, the final rule allows providers to exclude measures that do not apply and gives the specific conditions for exclusion of those measures that may not be applicable for all providers. Providers may seek an exclusion by attesting that the circumstances for the exclusion are met. If an exclusion applies, the provider's reporting obligation is reduced by one, even for menu set measures where alternate measures are available.

Some exclusions are based on systemic issues or practice characteristics that make it impossible for a provider to meet the measure. For example, the measure requiring hospitals to report lab results electronically to public health agencies can be excluded if no public health agency is capable of receiving that information electronically.[65] Other exclusions appear to be based on a desire to minimize the reporting burden on providers. For example, for the measure requiring more than 60 percent of patients with at least one medication in their medication list to have at least one medication order entered using CPOE, providers who write fewer than 100 prescriptions during the reporting period are exempted.[66]

Reduced Thresholds

For the final rule, CMS reduced the thresholds necessary to satisfy many meaningful use measures. Several of the proposed measures would have required 80 percent compliance but the final rule reduced the threshold to 50 percent, such as the requirement to record demographics and the requirement to provide patients with an electronic copy of their health information on request. Some were reduced even further, such as the requirement to use CPOE, which was dropped from 80 percent to 30 percent for EPs (although it was raised from 10% to 30% for hospitals) and the e-prescribing requirement, which was dropped from 75 percent to 40 percent.[67] However, some of the measures maintained the 80 percent threshold, such as the requirements to maintain active medication and allergy lists and to maintain an up-to-date problem list of diagnoses.[68] Thus, at a minimum, providers must collect and report at least some data for 80 percent of their patients in order to demonstrate meaningful use.

Reporting Period

CMS proposed to define the EHR reporting period for the first payment year as "any continuous 90-day period," and for subsequent years, as the entire payment year.[69] Commenters requested the 90-day reporting period for subsequent years as well. CMS rejected this request, reasoning that once EHRs are up and running and providers have demonstrated meaningful use once, there is no further need for a limited reporting period. There is not an equivalent 90-day reporting period for adopting, implementing or upgrading in the Medicaid program because those are generally one-time activities.[70] However, there is a 90-day reporting period for Medicaid meaningful use measures, regardless of when the first payment year is, in order to bring Medicaid in line with the Medicare meaningful use criteria.

Limited Medicaid Autonomy

Another element of the incentive programs that evolved significantly from the statute to the final rule is the degree of discretion granted to individual state Medicaid programs to define meaningful use. For Medicaid meaningful use, the only statutory requirement is that providers demonstrate meaningful use through a means "approved by the State and acceptable to the Secretary,"[71] which may be based on the methodologies applied in Medicare. Exercising the secretary's approval authority, CMS established a common definition of meaningful use for Medicaid as well as Medicare. In the proposed rule, CMS proposed that the Medicare definition would be a nationwide minimum standard (a "floor"). States could propose additional requirements for their state Medicaid programs above the federal standard, but only if the state-specific requirements would not require additional EHR functionality. Under the final rule, however, the Medicare definition of meaningful use is the minimum nationwide standard for both incentive programs, and state Medicaid agencies may modify it only by adding one to four of the specific public health-related additional requirements detailed in the regulations, subject to CMS approval.[72]

Participation in the Medicaid EHR incentive program is voluntary for states and is not a condition of participation in Medicaid. That is, states may continue to participate in Medicaid without implementing the Medicaid EHR incentive program in the state. A Medicaid EP is a meaningful user if he or she meets the meaningful use objectives and measures that apply to Medicare EPs (see above) and also meets any additional objectives and related measures imposed by the state and

approved by CMS.[73] In order to receive these payments, Medicaid EPs must be able to submit meaningful use data to the state (rather than CMS as for Medicare EPs), which means that the state must have the infrastructure in place to receive and evaluate these data and to distribute incentive payments. If states choose not to participate in the incentive program, there will be no mechanism for providers to receive Medicaid incentive payments.

As noted above, hospitals that meet the meaningful use requirements for Medicare will be deemed meaningful users for purposes of Medicaid as well, even if a state has approved a state-specific definition of meaningful use above the Medicare floor definition.[74] In addition, hospitals that report information on all of the 15 clinical quality measures, as applicable to their patient population, will qualify for both Medicare and Medicaid payments.[75] In the proposed rule, CMS included an alternate set of clinical quality measures for Medicaid hospitals for which the selected clinical quality measures did not reflect their patient population. However, CMS continued its support of unified standards by removing these alternate measures from the final rule and clarifying that an eligible hospital will meet the clinical quality measure requirements by simply reporting values for the clinical quality measures, even where the denominator is zero.[76]

What Does This Mean for Collaboratives Already Engaged in Performance Measurement and Public Reporting?

Overall, the proposed and final rules show the evolution of administration thinking and indicate the direction for future phases of the incentive programs. Initiatives such as the Aligning Forces for Quality program and other regional collaboratives, which are already supporting providers and other interested parties in performance measurement and reporting, can serve as important demonstrations of the impact of reporting and the utility of specific measures, including the more sophisticated measures that are likely to be required as meaningful use evolves.

Working with Providers

The EHR incentive programs are the means of implementing a national strategy for using HIT to drive quality improvement and delivery of more efficient and patient-centered health care. The common definition of meaningful use for both Medicare and Medicaid means that a wide variety of providers will be focusing their reporting efforts on the set of measures required to receive the incentive payments. However, while the bundle of measures is smaller, there will still be variation in the menu options chosen. At least for Stage 1 meaningful use, these efforts should be compatible with the collaboratives' reporting efforts, since the Stage 1 measures focus on the capability for reporting and widely-accepted performance measures. For example, the requirement to collect demographic data as structured data supports the collaboratives' goal of recording race, ethnicity and primary language data to improve equity. As subsequent stages of the EHR incentive programs add more meaningful use measures and clinical quality measures, collaboratives may want to align the quality measures required as part of their performance measurement and reporting efforts with these federal requirements to facilitate higher reporting rates.

Because the EHR incentive programs will not reach all providers, either because the providers are not included in the programs (such as FQHCs) or because the providers do not have enough Medicare or Medicaid patients, regional efforts to encourage adoption of HIT and performance measurement will continue to be important. There is the potential for widening disparities as a

result of the incentive programs if some providers are able to become meaningful users and others are not. It will be important for the collaboratives to continue to monitor quality in their regions and the impact of the incentive programs on equity, potentially focusing more on providers who do not or cannot participate in the EHR incentive programs.

Medicare/Medicaid Harmonization

To the extent that each community may have wanted their state's Medicaid program to require reporting of additional and more stringent quality measures, individual states will not be able to add those measures as a condition of receiving incentive payments. While greater harmonization of measures across Medicare and Medicaid may encourage greater reporting, it does so at the cost of state-selected Medicaid measures that address specific populations.

Even so, collaboratives should continue their work with payers and plans to collect quality data from insurers and providers on a broad range of measures. Regional performance measurement and reporting efforts can serve as testing grounds for more sophisticated measures that drive higher quality and more efficient health care, such as measures that support patient and provider decision-making and measures that combine quality data with demographic data to identify and reduce disparities. The limited indication given by CMS regarding what to expect from Stage 3 meaningful use criteria indicates that they will focus on quality, safety and efficiency improvements, decision support for national high priority conditions, patient access to self management tools, access to comprehensive patient data and improving population health.[77] These goals are squarely in line with priority areas for the collaboratives engaged in performance measurement, public reporting and quality improvement.

Greater Access to Information and Information Transparency

Greater use of EHRs, as incentivized by the Medicare and Medicaid incentives programs, will support greater ability to collect and access information that can be used to support performance measurement and public reporting.

EHRs also hold the promise of enabling the collection of both administrative and clinical information, supporting a greater base of available performance measures that better reflect the quality and cost of care delivered. This will enhance the ongoing efforts of collaboratives to collect and report meaningful quality information that is useful to a wide range of stakeholders, including providers, payers and consumers.

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[1] Public Health Service Act § 3000 et seq. [42 U.S.C. § 201 et seq.] (as added by ARRA § 13101). The term "HITECH Act" refers collectively to ARRA's Title XIII ("Health Information Technology") of Division A and Title IV ("Medicare and Medicaid Health Information Technology; Miscellaneous Medicare Provisions") of Division B.

[2] P.L. 111-5, Titles X and XXX.

[3] Social Security Act § 1903 (a)(3)(F) [42 U.S.C. § 1396b et seq.] (as added by ARRA § 4201(a)(1)).

[4] *Id.*

[5] 42 C.F.R. § 495.100.

[6] Social Security Act § 1848(o)(1)(A)(ii) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[7] Social Security Act § 1848(a)(7)(A) [42 U.S.C. § 1395w-4(a) et seq.] (as added by ARRA § 4101(b)).

[8] Social Security Act § 1848(o)(5)(C) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)). This provision references Social Security Act § 1861(r) for the actual list of EPs under the Medicare incentive program.

[9] Social Security Act § 1848(o)(1)(C)(ii) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[10] Continuing Extension Act of 2010 § 5(a)(1), PL 111-157, 124 Stat. 116 (2010).

[11] Social Security Act § 1848(o)(1)(A)(i) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[12] Social Security Act § 1848(o)(1)(B)(iv) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[13] Social Security Act § 1848(o)(1)(B)(v) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[14] Social Security Act § 1848(o)(1)(B)(ii)(I) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[15] Social Security Act § 1848(a)(7)(A) [42 U.S.C. § 1395w-4(a) et seq.] (as added by ARRA § 4101(b)).

[16] Social Security Act § 1848(a)(7)(B) [42 U.S.C. § 1395w-4(a) et seq.] (as added by ARRA § 4101(b)).

[17] Social Security Act § 1886(n)(6)(B) [42 U.S.C. § 1395ww et seq.] (as added by ARRA § 4102 (a)(1)). This provision references Social Security Act § 1886(d) for the actual list of eligible hospitals under the Medicare incentive program.

[18] Social Security Act §1886(d)(1)(B) [42 U.S.C. 1395ww et seq.].

[19] Medicare and Medicaid Programs: Electronic Health Record Incentive Program; Final Rule, 75 Fed. Reg. 44314, 44448 (July 28, 2010).

[20] Social Security Act § 1814(l)(3)(A) [42 U.S.C. 1395f(l)(3)(A) et seq.] (as added by ARRA § 4102(a)(2)].

[21] Social Security Act § 1886(b)(3)(B)(xi)(I) [42 U.S.C. § 1395ww(b)(3)(B) et seq.] (as added by ARRA § 4102 (b)(1)(B)).

[22] Social Security Act § 1886(n)(2)(A) [42 U.S.C. § 1395ww(n)(2)(A) et seq.] (as added by ARRA § 4102 (a)(1)).

[23] Social Security Act § 1886(n)(2)(A)(iii) [42 U.S.C. § 1395ww(n)(2)(A)(iii) et seq.] (as added by ARRA § 4102 (a)(1)).

[24] 75 Fed. Reg. 44314, 44460.

[25] 75 Fed. Reg. 44314, 44462.

[26] Social Security Act § 1853(l)(1) [42 U.S.C. § 1395w-23 et seq.] (as added by ARRA § 4101(c)). An affiliated EP is one that is employed by an MA organization or a contracting entity, is not hospital-based, furnishes at least 80 percent of his or her professional services, and provides at least 20 hours per week of patient care services.

[27] Social Security Act § 1853(m)(1) [42 U.S.C. § 1395w-23 et seq.] (as added by ARRA § 4102(c)). An affiliated hospital is under common corporate governance with an MA organization, and is one where more than two-thirds of the Medicare beneficiaries it serves are enrolled under MA plans.

[28] Social Security Act § 1848(o)(1)(A)(2) [42 U.S.C. § 1395w-4 et seq.] (as added by ARRA § 4101(a)).

[29] 75 Fed. Reg. 44314, 44576 (to be codified at 42 CFR § 495.204).

[30] Social Security Act § 1903(t)(6)(C)(i)(II) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[31] Social Security Act § 1903(t)(6)(C)(i)(I) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[32] Social Security Act § 1903(t)(3)(B) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[33] Social Security Act § 1903(t)(2)(A) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[34] *Id.* Needy individuals are defined as patients who are either covered by Medicaid, who receive uncompensated care or for whom charges are prospectively adjusted according to ability to pay.

[35] Social Security Act § 1903(t)(2) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)). Qualified eligible hospitals, by contrast, may participate in both the Medicare and Medicaid incentive programs simultaneously.

[36] The Medicare EHR incentive program makes bonus payments to EPs calculated at 75 percent of the overall Medicare reimbursements for a given EP during a given billing period; thus Medicare patient volume is key to maximizing incentive payments in the Medicare incentive program.

[37] Social Security Act § 1903(t)(2)(B) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[38] 75 Fed. Reg., 44314, 44497.

[39] Social Security Act § 1903(t)(4)(a) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[40] ARRA, §§ 4101(a) and 4102(a).

[41] ARRA, §§ 4101, 4102.

[42] Medicare and Medicaid Programs: Electronic Health Record Incentive Program; Proposed Rule, 75 Fed. Reg. 1844 (January 13, 2010); Health Information Technology: Initial Set of Standards, Implementation Specifications,

and Certification Criteria for Electronic Health Record Technology; Proposed Rule, 75 Fed. Reg. 2014 (January 13, 2010).

[43] Medicare and Medicaid Programs: Electronic Health Record Incentive Program; Final Rule, 75 Fed. Reg. 44314 (July 28, 2010); Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology; Final Rule, 75 Fed. Reg. 44590 (July 28, 2010).

[44] 75 Fed. Reg. 2014, 2042 (to be codified at 45 C.F.R. § 170). ONC issued a final rule for a temporary EHR certification program on June 24, 2010, that establishes the process that organizations will need to follow in order to be authorized by ONC to test and certify EHR technology. Establishment of the Temporary Certification Program for Health Information Technology; Final Rule, 75 Fed. Reg. 36158, 36203 (June 24, 2010) (to be codified at 45 C.F.R. § 170). A final rule on the permanent EHR certification program is expected by the end of 2010.

[45] 75 Fed. Reg. 44314 (to be codified at 42 C.F.R. §§ 412, 413, 422, and 495).

[46] 75 Fed. Reg. 44314, 44321.

[47] 75 Fed. Reg. 44314, 44566 (to be codified at 42 C.F.R § 495.6).

[48] 75 Fed. Reg. 44314, 44321-22.

[49] 75 Fed. Reg. 44314, 44322.

[50] 75 Fed. Reg. 44314, 44566-67 (to be codified at 42 C.F.R pt. 495.6).

[51] 75 Fed. Reg. 1868, 1863, 1994.

[52] 75 Fed. Reg. 44314, 44350-44350.

[53] 75 Fed. Reg. 44336-44337.

[54] 75 Fed. Reg. 44314, 44568 (to be codified at 42 C.F.R. pt. 495.6(g).

[55] *Id.*

[56] 75 Fed. Reg. 44314, 44566-67 (to be codified at 42 C.F.R pt. 495.6).

[57] *Id.*

[58] 75 Fed Reg. 44314, 44328.

[59] 75 Fed Reg. 44314, 44412.

[60] 75 Fed Reg. 44314, 44412.

[61] 75 Fed Reg. 44314, 44412.

[62] 75 Fed Reg. 44314, 44421.

[63] 75 Fed. Reg. 44314, 44570-71 (to be codified at 42 C.F.R § 495.8(a)(2)(i)).

[64] 75 Fed. Reg. 44314, 44326.

[65] 75 Fed. Reg. 44314, 44570 (to be codified at 42 C.F.R. § 405.6(g)(9)(3)).

[66] 75 Fed. Reg. 44314, 44567 (to be codified at 42 C.F.R. § 405.6(d)(1)(3)).

[67] 75 Fed. Reg. 44314, 44332-44333; 75 Fed. Reg. 44314, 44338 (to be codified at 42 C.F.R. pt. 495.6(d)).

[68] 75 Fed. Reg. 44314, 44339-41 (to be codified at 42 C.F.R. pt. 495.6(3)(ii), (5)(ii), (6)(ii).

[69] 75 Fed. Reg. 44314, 44320.

[70] 75 Fed. Reg. 44314, 44506.

[71] Social Security Act § 1903(t)(6)(C) [42 U.S.C § 1396b et seq.] (as added by ARRA § 4201(a)(2)).

[72] 75 Fed. Reg. 44314, 44581 (to be codified at 42 C.F.R pt. 495.316(d)(2)(i)-(iv)).

[73] 75 Fed. Reg. 44314, 44324.

[74] 75 Fed. Reg. 44314, 44325.

[75] 75 Fed. Reg. 44314, 44421.

[76] 75 Fed. Reg. 44314, 44421-22.

[77] 75 Fed. Reg. 44314, 44322.

Appendix 1. Side-by-Side Chart Showing Changes from Proposed to Final Rule on Meaningful Use		
Notice of Purposed Rulemaking (NPRM)	Final Rule	Summary of Change
Must meet all meaningful use (MU) reporting objectives and measures.	Must meet all core set objectives/measures (unless exclusions) plus five more from optional menu set (unless exclusions). In addition, at least one of the five chosen from the menu set must be an "Improve Population and Public Health" objective/measure.	Added flexibility by creating the menu set of objectives/measures to allow for provider choice, reflecting providers' varying needs and individual paths to full EHR use.
25 objectives/measures for EPs; 23 for eligible hospitals/CAHs.	20 objectives/measures for EPs (unless exclusions); 19 for eligible hospitals/CAHs (unless exclusions).	EPs: created a core set of 15 required objectives/measures and a menu set of 10 objectives/measures from which the EP must select five, for a total of 20 required for Stage 1. Eligible hospitals/CAHs: created a core set of 14 required objectives/measures and a menu set of 10 objectives/measures from which the eligible hospital/CAH must select five for a total of 20 required for Stage 1.
No exclusions allowed regarding compliance with objectives/measures for EPs and eligible hospitals/CAHs.	Includes certain exclusions that exempt EPs and eligible hospitals/CAHs from meeting required objectives under certain circumstances.	EPs/eligible hospitals/CAHs for whom a certain objective/measure is not applicable, or cannot be complied with based on scope of practice, are exempted from compliance with the objective. If this occurs for a given EHR reporting period, the EP/eligible hospital/CAH then has one less objective to meet to achieve meaningful use for that period.
For measures that include percentages, the denominator was all unique patients seen by	For measures that include percentages, the denominator is patients whose records are	Because certain measures require the use of particular technology within the certified

Appendix 1. Side-by-Side Chart Showing Changes from Proposed to Final Rule on Meaningful Use		
Notice of Purposed Rulemaking (NPRM)	Final Rule	Summary of Change
the EP or eligible hospital/CAH.	maintained using certified EHR technology.	EHR to comply, with respect to these measures, the final rule changed the denominator to those patients whose records are maintained in the EHR. Because EPs and eligible hospitals/CAHs may see patients at different locations, some of which may not have EHRs, the denominator was changed not to penalize providers in this situation.
Measure thresholds ranged from 10% to 80% of patients or orders, with most at the higher end of the range.	Measure thresholds range from 10% to 80% of patients or orders, with most at the middle or low end of the range.	In most cases lowered the measure compliance threshold out of concern that the majority of EPs and eligible hospitals/CAHs could not comply. But thresholds will increase in Stages 2 and 3.
Excluded hospital-based providers from both the Medicare and Medicaid incentive programs, and defined such providers as those who furnish substantially all of his or her Medicare-covered professional services during the relevant EHR reporting period in a hospital setting (whether inpatient or outpatient).	Excludes hospital-based providers from both the Medicare and Medicaid incentive programs, but changed the definition of such providers to those who furnish substantially all of his or her Medicare-covered professional services during the relevant EHR reporting period in a hospital inpatient or emergency department setting.	This new definition now allows those EPs who furnish substantially all of their Medicare-covered professional in outpatient hospital settings to participate in the Medicare and Medicaid incentive programs, assuming all other requirements are met.
Defined acute care hospital in Medicaid incentive program without including critical access hospitals (CAH); CAHs were included in Medicare incentive program.	Defines acute care hospital in Medicaid incentive program to now include CAHs.	This new definition now allows CAHs to participate in the Medicaid incentive program in response to concerns that such an integral Medicaid provider would be excluded.
Medicare: Unclear whether EPs and eligible hospitals/CAHs could participate in incentive program on a non-consecutive annual basis, or skip payment years.	Medicare: EPs and eligible hospitals/CAHs cannot participate in incentive program on a non-consecutive annual basis.	Clarified that because payments begin in 2011 and end in 2016, and a maximum of five payment years are available, participation must be on a consecutive annual basis.

Appendix 1. Side-by-Side Chart Showing Changes from Proposed to Final Rule on Meaningful Use		
Notice of Purposed Rulemaking (NPRM)	Final Rule	Summary of Change
Medicaid: Unclear whether EPs and eligible hospitals could participate in incentive program on a non-consecutive annual basis, or skip payment years.	Medicaid: EPs may participate on a non-consecutive annual basis. Eligible hospitals must participate in incentive program on a consecutive annual basis after 2016.	Clarified that because payments begin in 2011 and end in 2021, and because only a maximum of six payment years are available, EP participation may be on a non-consecutive annual basis. Because no payments can be made to hospitals after 2016 unless the eligible hospital has been paid a payment in the previous year, hospitals receiving a Medicaid incentive payment must receive payments on a consecutive, annual basis after the year 2016. Prior to 2016, Medicaid incentive payments to hospitals can be made on a non-consecutive, annual basis.
90-day EHR reporting period for first-year Medicaid incentive payment for AIU of certified EHR technology.	No EHR reporting period for first-year Medicaid incentive payment for AIU of certified EHR technology.	Removed the 90-day EHR reporting period for the first year Medicaid AIU incentive payment. Now, providers can simply attest to AIU in their first year to receive payment. Medicaid EPs and eligible hospitals who are demonstrating meaningful use for the first time in their second payment year will have a 90-day reporting period to maintain parity with Medicare providers' first meaningful use payment year. Subsequent reporting periods are the full year.
Common definition of meaningful use: Medicare is the floor, and states could apply for CMS approval to add requirements or alter how things are measured.	Common definition of meaningful use: Medicare is the floor, and states apply for CMS approval to add only from among (or all) four specific "Improve Population and Public Health" objectives/measures from the	Further restricted the ability of individual states to tailor their own meaningful use definitions to local populations. Change was made to create more commonalities between the Medicare and Medicaid incentive programs. But any

Appendix 1. Side-by-Side Chart Showing Changes from Proposed to Final Rule on Meaningful Use		
Notice of Purposed Rulemaking (NPRM)	Final Rule	Summary of Change
	menu set.	added requirements are not imposed on eligible hospitals participating in both incentive programs (only have to meet the floor Medicare definition).
Required the reporting of three core clinical quality measures (both EPs and eligible hospitals/CAHs), and also three to five clinical quality measures specific to a specialty (EPs only). Eligible hospitals/CAHs must report on all listed clinical quality measures for a given applicable case, from a list of 35. Includes separate set of eight alternative Medicaid-specific clinical quality measures that states may select to apply to eligible hospitals.	EPs must report on the three core clinical quality measures (or select from alternate list if none of the core clinical quality measures apply), and three more clinical quality measures selected from a list of 38 (for a total of six). Eligible hospitals/CAHs must report on the three core clinical quality measures (or select from alternate list if none of the core clinical quality measures apply), and all listed clinical quality measures for a given applicable case, from a list of 15.	Modified core clinical quality measures, removed specialty measure groups for EPs, reduced the number or reportable measures for eligible hospitals/CAHs, and removed the eight alternate Medicaid-specific clinical quality measures for eligible hospitals. For 2011, provide aggregate numerator, denominator and exclusions through attestation. For 2012, electronically submit the clinical quality measures.
Objectives/measures for patient-specific education resources and the recording of advanced directive status discussed but not proposed.	Objectives/measures for patient-specific education resources and the recording of advanced directive status are included in the menu set.	Following the recommendations of ONC's HIT Policy Committee, the final rule added these two objectives/measures as optional in the menu set.
Objective/measure for the electronics submission of administrative transactions (claims and eligibility).	Removes the objective/measure for the electronics submission of administrative transactions (claims and eligibility).	Because of concerns that this objective/measure would be too burdensome, and because public and private payers may not have the capabilities to receive this information electronically, CMS removed this requirement but will add in later stages.

Appendix 2.
Combined Matrix Showing Final Stage 1 Meaningful Use
Objectives and Measures and Changes from the NPRM to Final Rule

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
Health Outcomes Policy Priority: Improving quality, safety and efficiency, and reducing health disparities.			
Care Goals: (1) provide access to comprehensive patient health data for patient's health care team; (2) use evidence-based order sets and CPOE; (3) apply clinical decision support at the point of care; (4) generate lists of patients who need care and use them to reach out to patients; and (5) report information for quality improvement and public reporting.			
Use CPOE for medication orders directly entered by any licensed health care professional who can enter orders into the medical record per state, local and professional guidelines.*	Use CPOE for medication orders directly entered by any licensed health care professional who can enter orders into the medical record per state, local and professional guidelines.	More than 30% of all unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have at least one medication order entered using CPOE.**	Measure increased the percentage for eligible hospitals/CAHs from 10%, and reduced the percentage for EPs from 80%. Now both are set at 30%, and info can be entered by any licensed health care professional allowed to enter orders per state, local and professional guidelines. Percentage now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusion allowed for EPs that write fewer that 100 prescriptions during the EHR reporting period.

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
			Also, and only here, finalized stage 2 measure at 60% for both.
Implement drug-drug and drug-allergy interaction checks.	Implement drug-drug and drug-allergy interaction checks.	The EP/eligible hospital/CAH has enabled this functionality for the entire EHR reporting period.	Separated out "implementing drug-formulary checks" into its own objective in the menu set. Requires EPs/eligible hospitals/CAHs to enable this functionality for the entire EHR reporting period. The NPRM did not speak to how long the functionality must be enabled.
Maintain an up-to-date problem list of current and active diagnoses.	Maintain an up-to-date problem list of current and active diagnoses.	More than 80%of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) have at least one entry (or an indication that no problems are known for the patient) recorded as structured data.	Measure changed from "at least 80%" to "more than 80%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department. Also, dropped the NPRM's reference to active and current diagnoses based on ICD–9–CM or SNOMED CT®.
Generate and transmit permissible prescriptions electronically (eRx).*	N/A	More than 40% of all permissible prescriptions written by the EP are transmitted electronically using	Objective finalized as proposed. Measure reduced the percentage from "at least 75%" to "more

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
		certified EHR technology.**	than 40%." Percentage now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusions allowed for EPs who write fewer than 100 prescriptions over the EHR reporting period.
Maintain active medication list.	Maintain active medication list.	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (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.	Objective (same for both) finalized as proposed. Measure changed "at least 80%" to "more than 80%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department.
Maintain active medication allergy list.	Maintain active medication allergy list.	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (place of service (POS) 21 or 23) have at least one	Objective (same for both) finalized as proposed. Measure changed from "at least 80%" to "more than 80%," and clarified that with respect to eligible hospitals/CAHs, the

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
		entry (or an indication that the patient has no known medication allergies) recorded as structured data.	patient must be admitted to either the inpatient or emergency department.
Record demographics: • preferred language • gender • race • ethnicity • date of birth	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 or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data.	Measure reduced the percentage from "at least 80%" to "more than 50%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department. Also removed the recording of insurance type. Clarified that with respect to eligible hospitals/CAHs, the preliminary cause of death shall be recorded, as opposed to the final cause of death.
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	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 or 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.**	Objective (same for both) finalized as proposed. Measure reduced the percentage from "at least 80%" to "more than 50%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
			inpatient or emergency department. In the measure, removed requirement to "calculate and display BMI/plot and display growth charts for children 2-20 years, including BMI" because the certified EHR technology will do that automatically. Percentage now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusion allowed for (1) EPs who do not see patients over 2 years old, and (2) EPs who attest that measuring and recording height/weight/blood pressure has no relevance to scope of practice.
Record smoking status for patients 13 years old or older.*	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 or admitted to the eligible hospital's or CAH's inpatient or	Objective (same for both) finalized as proposed. Measure reduced the percentage from "at least 80%" to "more

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
		emergency departments (POS 21 or 23) have smoking status recorded as structured data.**	than 50%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department. Percentage now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusions allowed for EPs/eligible hospitals/CAHs who see no patients 13 years old or older.
Report ambulatory clinical quality measures to CMS (or, for EPs seeking the Medicaid incentive payment, the states).*	Report hospital clinical quality measures to CMS (or, for eligible hospitals seeking the Medicaid incentive payment, the states).*	For 2011, provides aggregate numerator, denominator and exclusions through attestation. For 2012, electronically submit the clinical quality measures.	Modified core clinical quality measures, removed specialty measure groups for EPs, reduced the number or reportable measures for eligible hospitals/CAHs from 35 to 15, and removed the eight alternate Medicaid-specific clinical quality measures for eligible hospitals.
Implement one clinical decision support rule relevant to specialty or high	Implement one clinical decision support rule related to a high priority hospital	Implements one clinical decision support rule.	Measure reduced requirement from five to the implementation of one clinical

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
clinical priority along with the ability to track compliance with that rule.	condition along with the ability to track compliance with that rule.		decision support rule.
			NPRM Objective: Submit claims electronically to public and private payers. Not finalized. NPRM Measure: At least 80% of all claims are filed electronically by the EP or the eligible hospital or CAH. Not finalized. NPRM Objective: Check insurance eligibility electronically from public and private payers. Not finalized. NPRM Measure: Insurance eligibility is checked electronically for at least 80% of all unique patients seen by the EP or admitted to the eligible hospital or CAH. Not finalized.
Health Outcomes Policy Priority: Engage patients and families in their health care.			
Care Goals: Provide patients and families with timely access to data, knowledge and tools to make informed decisions and to manage their health.			
Provide patients with an electronic copy of	Provide patients with an electronic copy of	More than 50% of all patients of the EP or	Measure reduced the percentage from "at

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
their health information (including diagnostics test results, problem list, medication lists, medication allergies) upon request.*	their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request.*	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.**	least 80%" to "more than 50%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department. Changed "allergies" to "medication allergies" in list of what is to be included in the electronic copy. Increased compliance time from 48 hours to three business days. Percentage is now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusions are allowed for EPs/eligible hospitals/CAHs who have no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
			period.
N/A	Provide patients with an electronic copy of their discharge instructions and procedures at time of discharge, upon request.*	More than 50% of all patients who are discharged from an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it.**	Objective finalized as proposed. Measure reduced the percentage from "at least 80%" to "more than 50%," and clarified that with respect to eligible hospitals/CAHs, the patient must be discharged from either the inpatient or emergency department. Clarified that emergency room discharge instructions are not the type of comprehensive discharge instructions required by this objective. Percentage is now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusion is allowed for eligible hospital/CAH that has no requests from patients or their agents for an

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
			electronic copy during the EHR reporting period.
Provide clinical summaries for patients for each office visit.*	N/A	Clinical summaries are provided to patients for more than 50% of all office visits within three business days.**	Objective finalized as proposed. Measure reduced the percentage from "at least 80%" to "more than 50%." Added a compliance time of three business days. Percentage is now based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusions are allowed for EPs who have no office visits during the EHR reporting period.
Health Outcomes Policy Priority: Improve care coordination.			
Care Goals: Exchange meaningful clinical information among professional health care team.			
Have capability to exchange key clinical information (for example, problem list, medication list, medication allergies and diagnostic test results), among	Have capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies	Performs at least one test of certified EHR technology's capacity to electronically exchange key clinical information.	For EPs, added the parenthetical list of types of clinical information the EP should have the capability to exchange. For eligible

CORE SET			
Stage 1 Objectives for EPs	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
providers of care and patient-authorized entities electronically.	and diagnostic test results), among providers of care- and patient- authorized entities electronically.		hospitals/CAHs, changed "allergies" to "medication allergies" in parenthetical list of types of clinical information the eligible hospital/CAH should have the capability to exchange. Measure is finalized as proposed.
Health Outcomes Policy Priority: Ensure adequate privacy and security protections for personal health information.			
Care Goals: (1) ensure privacy and security protections for confidential information through operating policies, procedures, technologies and compliance with applicable law and (2) provide transparency of data sharing to patient.			
Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.	Conducts or reviews a security risk analysis per 45 CFR 164.308(a)(1) of the certified EHR technology, implement security updates as necessary, and correct identified security deficiencies as part of its risk management process.	Objective (same for both) finalized as proposed. Measure replaced "implement security updates as necessary" with "implement security updates as necessary and correct identified security deficiencies as part of its risk management process."

MENU SET			
Stage 1 Objectives for (EPs)	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
Health Outcomes Policy Priority: Improving quality, safety and efficiency, and reducing health disparities.			
Care Goals: (1) provide access to comprehensive patient health data for patient's health care team; (2) use evidence-based order sets and CPOE; (3) apply clinical decision support at the point of care; (4) generate lists of patients who need care and use them to reach out to patients; and (5) report information for quality improvement and public			

MENU SET			
Stage 1 Objectives for (EPs)	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
reporting.			
Implement drug-formulary checks.*	Implement drug-formulary checks.*	The EP/eligible hospital/CAH has enabled this functionality and has access to at least one internal or external formulary for the entire EHR reporting period.	Moved from a required objective to an optional menu set objective. Separated out as own independent objective/measure. Exclusion is allowed for EPs that write fewer than 100 prescriptions during the EHR reporting period.
N/A	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 as structured data.** Percentage based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusion allowed for eligible hospital/CAH that admits no patients 65 years old or older during the	Discussed but not proposed in NPRM.

MENU SET			
Stage 1 Objectives for (EPs)	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
		EHR reporting period.	
Incorporate clinical lab-test results into certified EHR technology as structured data.*	Incorporate clinical lab-test results into certified EHR technology as structured data.	More than 40% of all clinical lab test results ordered by the EP or 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 in either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.**	Moved from a required objective to an optional menu set objective. Objective (same for both) is finalized as proposed. Measure reduced the percentage from "at least 50%" to "more than 40%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department. Percentage is based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusion is allowed for an EP who orders no lab tests whose results are either in a positive/negative or numeric format during the EHR reporting period.
Generate lists of	Generate lists of	Generates at least one	Moved from a

MENU SET			
Stage 1 Objectives for (EPs)	Stage 1 Objectives for Eligible Hospitals and CAHs	Stage 1 Measures	Changes from NPRM to Final Rule
patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach.	patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach.	report listing patients of the EP, eligible hospital or CAH with a specific condition.	required objective to an optional menu set objective. Objective exchanged the "and" with an "or" to clarify that only one of the uses listed (not all) is requited for compliance. Measure (same for both) is finalized as proposed. List is only required to include those patients whose records are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH.
Send reminders to patients per patient preference for preventive/follow up care.*	N/A	More than 20% of all unique patients 65 years or older or 5 years old or younger are sent an appropriate reminder during the EHR reporting period.**	Moved from a required objective to an optional menu set objective. Objective is finalized as proposed. Measure reduced the percentage from "at least 50%" to "more than 20%." Measure changed the age range from "50 years of age and over" to "65 years or older

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			or 5 years old or younger." Percentage is based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusion is allowed for an EP who has no patients 65 years old or older or 5 years old or younger with records maintained using certified EHR technology.
Health Outcomes Policy Priority: Engage patients and families in their health care.			
Care Goals: Provide patients and families with timely access to data, knowledge and tools to make informed decisions and to manage their health.			
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.*	N/A	At least 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.	Moved from a required objective to an optional menu set objective. Objective changed "allergies" to "medication allergies" in parenthetical list of types of health information to which the EP should provide timely electronic access. Objective/measure changed time of compliance from "96 hours" to "four

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			business days." Measure added that electronic access is "subject to the EP's discretion to withhold certain information." Exclusions are allowed for an EP that neither orders nor creates any of the information included in the minimum data set for this objective during the EHR reporting period.
Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate.	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 or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources.	Discussed but not proposed in the NPRM.
Health Outcomes Policy Priority: Improve care coordination.			
Care Goals: Exchange meaningful clinical information among professional health care team.			
Perform medication reconciliation if the EP, eligible hospital or CAH receives a patient from another setting of care or provider of care or believes an encounter is relevant.*	Perform medication reconciliation if the EP, eligible hospital or CAH receives a patient from another setting of care or provider of care or believes an encounter is relevant.	The EP, eligible hospital or CAH performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or	Moved from a required objective to an optional menu set objective. Measure reduced the percentage from "at least 80%" to "more than 50%," and clarified that with respect to eligible hospitals/CAHs, the

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		emergency department (POS 21 or 23).	patient must be admitted to either the inpatient or emergency department. Percentage is based upon patient records that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusions are allowed for an EP who was not on the receiving end of any transition of care during the EHR reporting period.
Provide summary care record for each transition of care or referral if the EP, eligible hospital or CAH transitions their patient to another setting of care or provider of care or refers their patient to another provider of care.*	Provide summary care record for each transition of care or referral of the EP, eligible hospital or CAH transitions their patient to another setting of care or provider of care or refers their patient to another provider of care.	The EP, 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.**	Moved from a required objective to an optional menu set objective. Measure reduced the percentage from "at least 80%" to "more than 50%," and clarified that with respect to eligible hospitals/CAHs, the patient must be admitted to either the inpatient or emergency department. Percentage is based upon patient records

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			that are maintained using certified EHR technology, as opposed to all unique patients seen by the EP or eligible hospital/CAH. Exclusions are allowed for an EP who does not transfer a patient to another setting or refer a patient to another provider during the EHR reporting period.
Health Outcomes Policy Priority: Improve population and public health.			
Care Goals: Communicate with public health agencies.			
Has capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice.*	Has capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice.*	Performs 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, eligible hospital or CAH submits such information have the capacity to receive the information electronically).	Moved from a required objective to an optional menu set objective. Objective added "Immunization Information Systems" as an alternative to "immunizations registries" for submission compliance. Objective added "in accordance with to applicable law and practice." Measure added a requirement for "follow-up submission if the test

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			is successful." Measure added qualification to compliance if "none of the immunization registries to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically." Exclusions are allowed for EPs and eligible hospitals/CAHs that have not given any immunizations during the EHR reporting period.
N/A	Has 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.	Performs 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 eligible hospital or CAH submits such information have the capacity to receive the information electronically).	Moved from a required objective to an optional menu set objective. Objective added "in accordance with applicable law and practice." Measure added a requirement for "follow-up submission if the test is successful." Measure added qualification to compliance if "none of the public health agencies to which the

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			EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically."
Has capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice.*	Has capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice.	Performs 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, eligible hospital, or CAH submits such information have the capacity to receive the information electronically).	Moved from a required objective to an optional menu set objective. Objective added "in accordance with applicable law and practice." Measure added a requirement for "follow-up submission if the test is successful." Measure added qualification to compliance if "none of the public health agencies to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically." Exclusion is allowed for EPs who do not collect any reportable syndromic information on their patients during the EHR reporting period.

*Objective provides for certain exclusions for EPs and/or eligible hospitals/CAHs for whom the objective is not applicable or cannot be complied with based on scope of practice.

**Measure with a denominator based on counting actions for patients whose records are maintained using certified EHR technology, as opposed to a denominator based on all unique patients seen by the EP or eligible hospital/CAH.