American College of Radiology
Summary of Meaningful Use Rules

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10-2011 Update: *The October 2011 revision incorporates proposed changes and new guidance from CMS, new information about radiology EHRs, new links, deletion of the Stage 1 final rule's "3 stages" descriptions, and other minor edits for clarification or streamlining purposes.*

General Overview

The American Recovery and Reinvestment Act of 2009 (ARRA or "stimulus") was a supplemental appropriations package signed by President Obama in February 2009. Among the various federal initiatives supported or authorized by ARRA were Medicare and Medicaid programs incentivizing the meaningful use of certified electronic health record (EHR) technology.

In January 2010, the Centers for Medicare and Medicaid Services (CMS) and Office of the National Coordinator for HIT (ONC) released a proposed rule and interim final rule, respectively, for public comment. The CMS proposed rule addressed "meaningful use" requirements for eligible professionals (EPs) and eligible hospitals. The ONC interim final rule addressed the certification criteria, standards, and implementation specifications for certified EHR technology.

The American College of Radiology (ACR), which had been actively engaged with CMS and ONC throughout the yearlong regulatory process, submitted comments with fellow radiology organizations, the American Board of Radiology (ABR), Radiological Society of North America (RSNA), and Society for Imaging Informatics in Medicine (SIIM) (CMS NPRM comments; ONC IFR comments). Approximately 2,000 public comments were submitted to CMS on the proposed rule, and approximately 400 public comments were submitted to ONC on the interim final rule.

On July 13, 2010, CMS and ONC released final rules implementing Stage 1 of meaningful use. The following summary is focused exclusively on the Medicare program for EPs (CMS final rule) and the technology that must be used by EPs (ONC final rule)—it does not address the EHR incentive program for eligible hospitals or the Medicaid version of the program.

Note that this summary is for general informational purposes only, and is not a legal document or guidance.

Three Stages of Meaningful Use

CMS and ONC has planned for three "stages" of meaningful use between 2011 and 2015, the requirements of which are to be updated on a biennial basis via future rulemakings. CMS and ONC are currently engaged in the rulemaking process for Stage 2, and intend to publish the Stage 2 proposed rules for public comment around the end of 2011 or beginning of 2012. The current line of thinking, which may change in future rulemakings, is that the stages are like an escalator where participants enter at Stage 1 regardless of which year they begin to participate. The Stages are intended to correspond with an EP's payment year as follows:

TABLE 1: Stage of Meaningful Use by First Payment Year

First Year of Participation	Stage Per Year of Participation				
	2011	**2012**	**2013**	**2014**	**2015**
2011	Stage 1	Stage 1	Stage 2	Stage 2	TBD
2012		Stage 1	Stage 1	Stage 2	TBD
2013			Stage 1	Stage 1	TBD
2014				Stage 1	TBD

Although it is not currently in regulation, the National Coordinator for HIT, Farzad Mostashari, has publicly signaled that the beginning of Stage 2 for early adopters who got on the escalator in 2011 will likely be delayed until 2014, thus giving those specific EPs three years in Stage 1 instead of the two years shown in the above table.

Physician Eligibility

All Medicare-participating, Social Security Act-defined physicians are eligible to participate in the Medicare EHR incentive program for EPs if they are not hospital-based, whereas "hospital-based" status is determined by the 21 (inpatient) and 23 (emergency room) CMS Place of Service (POS) codes. Physicians are considered hospital-based, and therefore ineligible for the EHR incentive program, if they provide 90% or more of their covered professional services in POS Code 21 or 23 settings. "Covered professional services" are essentially Medicare physician fee schedule (PFS) services paid under Section 1848 of the Social Security Act.

CMS uses PFS data from the federal fiscal year prior to the calendar year in which the EHR Incentive Program payment is made for eligibility determination purposes. CMS clarified that the 90% percentage calculation is made based on total number of Medicare allowed services for which the EP was reimbursed, with each unit of a CPT billing code counting as a single service. So while it uses claims information, the actual calculation is based on volume of services as opposed to compensation amounts.

It is critical to note that because of language in the Continuing Extension Act signed into law in April 2010, outpatient hospital settings (POS Code 22) are not actually considered hospitals in the EHR Incentive Program. Many hospital-contracted professionals will find they are indeed eligible—even Medicare-participating residents and academic hospital professionals will be eligible if they meet the criteria in the preceding paragraphs.

The vast majority of practicing radiologists will be eligible for the Medicare version of the program for EPs. Only 14% of all Medicare participating physicians provide 90% or more of their services in exclusively inpatient or emergency department settings, and thus will be ineligible to participate in the Medicare incentive program for EPs. Many of those 14% are likely to be emergency physicians and hospitalists.

Note that there is a similar Medicare/Medicaid program pertaining to the meaningful use of certified EHR technology by hospitals. In that version of the program, hospitals are responsible for the implementing all requirements of the program, whereas hospital-based physicians are not incentivized or penalized by CMS. The hospital version of the program has slightly different meaningful use and technology requirements than the EP version, and is thus outside the purview of this summary.

Also note that there is a similar Medicaid version of the meaningful use program for EPs, featuring larger compensation amounts for compliance than the Medicare version, and no future penalties for noncompliance. However, the Medicaid version of the program requires that non-hospital-based physicians have at least 30% of their total patient volume attributable to those receiving Medicaid—for pediatricians, as defined by Medicaid programs in the states, the threshold is lowered to 20%. As few radiologists would meet the 30% threshold, the Medicaid version of the program for EPs is outside the purview of this summary.

Additional Requirement for EPs in Multiple Practices/Locations

If an EP provides professional services in more than one practice or location, 50% or more of the EP's patient encounters during the reporting period must be at practice(s) or location(s) equipped with certified EHR technology. For example, if an EP works in three practices/locations and two of the three have certified EHR technology while the third does not, 50% or more of the EP's patient encounters must occur at the two locations that have the certified EHR technology.

All meaningful use requirements are limited to actions taken at the practice(s)/location(s) that have certified EHR technology at the beginning of the EHR reporting period. Therefore, patient encounters at practices or locations that do not have certified EHR technology are not factored into an EP's functional measure calculations.

Furthermore, CMS clarified that for EPs who see patients in both inpatient/ER and outpatient settings and certified EHR technology is available at each location, these EPs must base their meaningful use calculations on patients in only the outpatient setting(s).

EHR Reporting Periods and Payment Years

To qualify for an incentive payment under the Medicare program for a given payment year, an EP must meaningfully use certified EHR technology for the duration of the EHR reporting period of the relevant payment year. The EHR reporting period may be any continuous 90-day period within the first year, and the entire calendar year for all subsequent years. This 90-day/first year concept means that EPs could conceivably begin their EHR reporting period late in their first payment year.

Incentive Payments

Incentive payments for EPs cannot exceed 75% of their total Medicare physician fee schedule compensation for the year. There are also payment/calendar year-based hard caps on the incentives, which are shown in Table 2 below. For EPs in a HPSA (health professional shortage area), incentive amounts are increased by 10%.

The following table illustrates the maximum incentive payments, assuming an EP's total allowed Medicare charges for covered professional services also meets the 75% cap. For example, for an EP to get the full $18,000 incentive amount in 2011, that EP must receive at least $24,000 in compensation for their professional services from the Medicare physician fee schedule – if the EP only receives $20,000, the maximum incentive bonus would be lowered to $15,000.

TABLE 2: Maximum Payment for EPs in the Medicare EHR Incentive Program (not factoring in the HPSA 10% bonus)

Calendar Year	First Payment Year in Which an EP Receives an Incentive Payment				
	2011	**2012**	**2013**	**2014**	**2015+**
2011	Up to $18,000	----------	----------	----------	$0
2012	Up to $12,000	Up to $18,000	----------	----------	$0
2013	Up to $8,000	Up to $12,000	Up to $15,000	----------	$0
2014	Up to $4,000	Up to $8,000	Up to $12,000	Up to $12,000	$0
2015	Up to $2,000	Up to $4,000	Up to $8,000	Up to $8,000	$0
2016	----------	Up to $2,000	Up to $4,000	Up to $4,000	$0
Total	**Up to $44,000**	**Up to $44,000**	**Up to $39,000**	**Up to $24,000**	**$0**

After CMS confirms an EP's satisfaction of the requirements for the EHR reporting period, the incentive payment for that year would be given to the EP in a single, consolidated sum. EPs would be allowed to reassign their incentive payment to one employer/entity with which they have a valid employment agreement or contract providing for such reassignment. If an EP's National Provider Identifier (NPI) is associated with more than one practice, the EP would choose one tax identification number (TIN) to receive the incentive payment.

Payment Reductions Beyond 2015

Although only the foundational regulatory framework for the penalties was promulgated in the Stage 1 CMS final rule, it should be noted that there will be reimbursement reductions ("payment adjustments") for EPs who do not demonstrate meaningful use beginning in 2015. CMS intends to discuss the penalties in greater detail in the Stage 2 and/or 3 rulemakings.

Note there will be "significant hardship exemption" options for rural EPs and certain other EPs who wish to avoid the payment reductions. By statute, EPs will be able to apply for the significant hardship exemption annually for a

maximum of 5 years, which implies that some noncompliant EPs will be able to avoid the payment adjustments until 2020 if they successfully apply for the exemption. The significant hardship exemption options/categories have not yet been written into regulation, but will presumably be detailed in the Stage 2 and/or Stage 3 rulemakings.

TABLE 3: Medicare Payment Reductions for Not Demonstrating Meaningful Use in 2015 and Beyond

Calendar Year	Payment Reductions
2015	Minus 1% total Medicare fee schedule compensation
2016	Minus 2% total Medicare fee schedule compensation
2017	Minus 3% total Medicare fee schedule compensation
2018	Minus 3%, or minus 4% if less than 75% of all EPs are not demonstrating meaningful use
2019 and beyond	Minus 3%, or minus 5% if less than 75% of all EPs are not demonstrating meaningful use

Meaningful Use Functional Measures in Stage 1

Whether or not an EP is satisfying the requirements of the Medicare EHR incentive program is determined by compliance with a variety of meaningful use "functional measures" as calculated by certified EHR technology.

The Stage 1 functional measures focus mostly on basic data traditionally collected and maintained within primary care settings. CMS and ONC made the decision to not develop unique functional measures designed uniquely for medical specialties or unique pathways per specialty. However, due to the engagement of ACR and other medical specialty stakeholders, CMS' final rule included flexibility not in the proposed rule or the prior public discussions. For example, instead of requiring that EPs report all 25 functional measures per the proposed rule, EPs now report 15 "Core Set" measures, and choose 5 out of 10 "Menu Set" measures (including 1 of the 2 population and public health menu set measures). More importantly, several functional measures feature exclusion criteria to account for differing scopes of practice. For example, if an EP writes fewer than 100 prescriptions during the reporting period, she/he would be excluded from the eRx, CPOE, and drug formulary check measures. Exclusions are also factored into the menu set measures in an interesting way—if an EP meets the exclusion criteria for 1 of the menu set measures, the EP would select and report on 4 of the remaining 9 menu set measures and so on. Note that being excluded from both of the "population and public health" related menu set measures only counts as a single exclusion.

The flexibility also extends to the requirement pertaining to the functional measure that deals with reporting of clinical quality measures. EPs have to demonstrate 6 total—3 core or alternate core clinical quality measures, and 3 additional non-core/alternate core clinical quality measures of the respective EP's choosing. If an EP has a zero denominator for all 3 core and all 3 alternate core clinical quality measures, the EP is allowed to report zero denominators. The clinical quality measures are discussed later in this summary.

An important side note that is commonly misunderstood is that **CMS does not specify who must enter information into the patient's record, with the exception of the CPOE-related core measure** (in which case, the data entry must be done any licensed healthcare professional who is allowed to do so per law and professional guidelines). Therefore, in Stage 1, patient data can be entered by administrative/technical staff, shared by another provider, or any number of different data entry and exchange scenarios. To be clear, **none of the measures explicitly require face-to-face interaction with a patient by the EP**.

TABLE 4: Core Measures – Comply with all 15 measures. Meeting the exclusion for a given measure (if one is available) satisfies the requirements of the measure.

Core Measure	CMS Specification for the Measure
Objective: Use computerized provider order entry (CPOE) for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines. **Measure:** More than 30% of all unique patients with at least one medication in their medication list seen by the EP have at least one medication order entered using CPOE. **Exclusion:** Any EP who writes fewer than 100 prescriptions during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/1CPOEforMedicationOrders.pdf
Objective: Implement drug-drug and drug-allergy interaction checks. **Measure:** The EP has enabled this functionality for the entire EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/2DrugInteractionChecks.pdf
Objective: Maintain an up-to-date problem list of current and active diagnoses. **Measure:** More than 80 percent of all unique patients seen by the EP have at least one entry or an indication that no problems are known for the patient recorded as structured data.	http://www.cms.gov/EHRIncentivePrograms/Downloads/3MaintainProblemList.pdf
Objective: Generate and transmit permissible prescriptions electronically (eRx). **Measure:** More than 40% of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology. **Exclusion:** Any EP who writes fewer than 100 prescriptions during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/4PermissiblePrescriptions.pdf
Objective: Maintain active medication list. **Measure:** More than 80% of all unique patients seen by the EP have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data	http://www.cms.gov/EHRIncentivePrograms/Downloads/5ActiveMedicationList.pdf
Objective: Maintain active medication allergy list. **Measure:** More than 80% of all unique patients seen by the EP have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data.	http://www.cms.gov/EHRIncentivePrograms/Downloads/6MedicationAllergyList.pdf
Objective: Record all of the following demographics: (A) Preferred language. (B) Gender. (C) Race. (D) Ethnicity. (E) Date of birth. **Measure:** More than 50% of all unique patients seen by the EP have demographics recorded as structured data.	http://www.cms.gov/EHRIncentivePrograms/Downloads/7RecordDemographics.pdf

Objective: Record and chart changes in the following vital signs: (A) Height. (B) Weight. (C) Blood pressure. (D) Calculate and display body mass index (BMI). (E) Plot and display growth charts for children 2–20 years, including BMI. **Measure:** More than 50% of all unique patients age 2 and over seen by the EP, height, weight and blood pressure are recorded as structured data. **Exclusion:** Any EP who either see no patients 2 years or older, or who believes that all three vital signs of height, weight, and blood pressure of their patients have no relevance to their scope of practice.	http://www.cms.gov/EHRIncentivePrograms/Downloads/8RecordVitalSigns.pdf
Objective: Record smoking status for patients 13 years old or older. **Measure:** More than 50% of all unique patients 13 years old or older seen by the EP have smoking status recorded as structured data. **Exclusion:** Any EP who sees no patients 13 years or older.	http://www.cms.gov/EHRIncentivePrograms/Downloads/9RecordSmokingStatus.pdf
Objective: Report ambulatory clinical quality measures to CMS. **Measure:** Successfully report to CMS ambulatory clinical quality measures selected by CMS in the manner specified by CMS.	http://www.cms.gov/EHRIncentivePrograms/Downloads/10ClinicalQualityMeasures-CQMs.pdf
Objective: Implement one clinical decision support rules relevant to specialty or high clinical priority along with the ability to track compliance with that rule. **Measure:** Implement one clinical decision support rule.	http://www.cms.gov/EHRIncentivePrograms/Downloads/11ClinicalDecisionSupportRule.pdf
Objective: Provide patients with an electronic copy of their health information (including diagnostics test results, problem list, medication lists, medication allergies) upon request. **Measure:** More than 50% of all patients who request an electronic copy of their health information are provided it within 3 business days. **Exclusion:** Any EP that has no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/12ElectronicCopyofHealthInformation.pdf
Objective: Provide clinical summaries for patients for each office visit. **Measure:** Clinical summaries provided to patients for more than 50% of all office visits within 3 business days. **Exclusion:** Any EP who has no office visits during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/13ClinicalSummaries.pdf
Objective: 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. **Measure:** Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.	http://www.cms.gov/EHRIncentivePrograms/Downloads/14ElectronicExchangeofClinicalInformation.pdf
Objective: Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities. **Measure:** 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 and correct identified security deficiencies as part of its risk management process.	http://www.cms.gov/EHRIncentivePrograms/Downloads/15ProtectElectronicHealthInformation.pdf

TABLE 5: Menu Set Measures - Choose 5 of 10, including at least 1 of the 2 "public health" measures. If you meet the exclusion criteria for 1 menu set measure, choose 4 of the remaining 9, and so on. Exclusions from both of the "public health" menu set measures only counts as 1 total menu set measure exclusion.

Menu Set Measure	CMS Specification for the Measure
Objective: Implement drug-formulary checks. **Measure:** The EP has enabled this functionality and has access to at least one internal or external formulary for the entire EHR reporting period. **Exclusion:** Any EP who writes fewer than 100 prescriptions during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/1DrugFormularyChecks.pdf
Objective: Incorporate clinical lab-test results into EHR as structured data. **Measure:** More than 40% of all clinical lab tests results ordered by the EP during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data. **Exclusion:** An EP who orders no lab tests whose results are either in a positive/negative or numeric format during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/2ClinicalLabTestResults.pdf
Objective: Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach. **Measure:** Generate at least one report listing patients of the EP with a specific condition.	http://www.cms.gov/EHRIncentivePrograms/Downloads/3PatientLists.pdf
Objective: Send reminders to patients per patient preference for preventive/follow-up care. **Measure:** More than 20% of all patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period. **Exclusion:** An EP who has no patients 65 years old or older or 5 years old or younger with records maintained using certified EHR technology.	http://www.cms.gov/EHRIncentivePrograms/Downloads/4PatientReminders.pdf
Objective: Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, and allergies) within 4 business days of the information being available to the EP. **Measure:** At least 10% of all unique patients seen by the EP are provided timely (available to the patient within 4 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. **Exclusion:** Any EP that neither orders nor creates any of the information listed at 45 CFR 170.304(g) during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/5PatientElectronicAccess.pdf
Objective: Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate. **Measure:** More than 10% of all unique patients seen by the EP are provided patient-specific education resources.	http://www.cms.gov/EHRIncentivePrograms/Downloads/6Patient-specificEducationResources.pdf

Objective: The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation. **Measure:** The EP performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP. **Exclusion:** An EP who was not the recipient of any transitions of care during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/7MedicationReconciliation.pdf
Objective: The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral. **Measure:** The EP who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals. **Exclusion:** An EP who neither transfers a patient to another setting nor refers a patient to another provider during the EHR reporting period.	http://www.cms.gov/EHRIncentivePrograms/Downloads/8TransitionofCareSummary.pdf
Objective: Capability to submit electronic data to immunization registries or immunization information systems and actual submission according to applicable law and practice. **Measure:** Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP submits such information has the capacity to receive the information electronically). **Exclusion:** An EP who administers no immunizations during the EHR reporting period or where no immunization registry has the capacity to receive the information electronically. ***NOTE:*** *Exclusion from both public health-related menu measures only counts as a single exclusion.*	http://www.cms.gov/EHRIncentivePrograms/Downloads/9ImmunizationRegistriesDataSubmission.pdf
Objective: Capability to submit electronic syndromic surveillance data to public health agencies and actual submission according to applicable law and practice. **Measure:** Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP submits such information has the capacity to receive the information electronically). **Exclusion:** An EP who does not collect any reportable syndromic information on their patients during the EHR reporting period or does not submit such information to any public health agency that has the capacity to receive the information electronically. ***NOTE:*** *Exclusion from both public health-related menu measures only counts as a single exclusion.*	http://www.cms.gov/EHRIncentivePrograms/Downloads/10SyndromicSurveillanceDataSubmission.pdf

Clinical Quality Measures

As discussed previously, one of the core functional measures involves "reporting clinical quality measures." EPs would report 3 core or alternate core clinical quality measures and 3 additional discretionary clinical quality measures. For circumstances in which the core and alternate core clinical quality measures are not applicable for specific patient populations and/or an EP's scope of practice, the patients will not appear in the denominator or will be excluded. CMS does not require that the EP have a particular number of patients in the denominator, which could be zero as calculated by the EHR.

The most important thing to understand is that for the Stage 1 EHR Incentive Program, CMS does not require a minimum level of performance in the clinical quality measures. The only regulatory requirement for Stage 1 is the act of reporting the clinical quality measures.

Table 6 below lists all 44 clinical quality measures, including the 3 core, 3 alternate core, and 38 discretionary clinical quality measures. The associated specifications for each measure are available to download from the CMS website (.zip file).

TABLE 6: Core, Alternate Core, and Discretionary Clinical Quality Measures ("Core" are highlighted in yellow and "Alternate Core" are highlighted in blue—all others are discretionary)

NQF / PQRI Number	Clinical Quality Measure Title and Description
NQF 0059 PQRI 1	Title: Diabetes: Hemoglobin A1c Poor Control Description: Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c > 9.0%.
NQF 0064 PQRI 2	Title: Diabetes: Low Density Lipoprotein (LDL) Management and Control Description: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had LDL-C < 100 mg/dL).
NQF 0061 PQRI 3	Title: Diabetes: Blood Pressure Management Description: Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had blood pressure <140/90 mmHg.
NQF 0081 PQRI 5	Title: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure and LVSD (LVEF < 40%) who were prescribed ACE inhibitor or ARB therapy.
NQF 0070 PQRI 7	Title: Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI) Description: Percentage of patients aged 18 years and older with a diagnosis of CAD and prior MI who were prescribed beta-blocker therapy.
NQF 0041 PQRI 110	Title: Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old Description: Percentage of patients aged 50 years and older who received an influenza immunization during the flu season (September through February).
NQF 0043 PQRI 111	Title: Pneumonia Vaccination Status for Older Adults Description: Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.
NQF 0031 PQRI 112	Title: Breast Cancer Screening Description: Percentage of women 40-69 years of age who had a mammogram to screen for breast cancer.
NQF 0034 PQRI 113	Title: Colorectal Cancer Screening Description: Percentage of adults 50-75 years of age who had appropriate screening for colorectal cancer.

NQF / PQRI Number	Clinical Quality Measure Title and Description
NQF 0067 PQRI 6	Title: Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD Description: Percentage of patients aged 18 years and older with a diagnosis of CAD who were prescribed oral antiplatelet therapy.
NQF 0083 PQRI 8	Title: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure who also have LVSD (LVEF < 40%) and who were prescribed betablocker therapy.
NQF 0105 PQRI 9	Title: Anti-depressant medication management: (a) Effective Acute Phase Treatment, (b)Effective Continuation Phase Treatment Description: The percentage of patients 18 years of age and older who were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment.
NQF 0086 PQRI 12	Title: Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation Description: Percentage of patients aged 18 years and older with a diagnosis of POAG who have been seen for at least two office visits who have an optic nerve head evaluation during one or more office visits within 12 months.
NQF 0088 PQRI 18	Title: Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy Description: Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed which included documentation of the level of severity of retinopathy and the presence or absence of macular edema during one or more office visits within 12 months.
NQF 0089 PQRI 19	Title: Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care Description: Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed with documented communication to the physician who manages the ongoing care of the patient with diabetes mellitus regarding the findings of the macular or fundus exam at least once within 12 months.
NQF 0047 PQRI 53	Title: Asthma Pharmacologic Therapy Description: Percentage of patients aged 5 through 40 years with a diagnosis of mild, moderate, or severe persistent asthma who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment.
NQF 0001 PQRI 64	Title: Asthma Assessment Description: Percentage of patients aged 5 through 40 years with a diagnosis of asthma and who have been seen for at least 2 office visits, who were evaluated during at least one office visit within 12 months for the frequency (numeric) of daytime and nocturnal asthma symptoms.
NQF 0002 PQRI 66	Title: Appropriate Testing for Children with Pharyngitis Description: Percentage of children 2-18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic and received a group A streptococcus (strep) test for the episode.
NQF 0387 PQRI 71	Title: Oncology Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer Description: Percentage of female patients aged 18 years and older with Stage IC through IIIC, ER or PR positive breast cancer who were prescribed tamoxifen or aromatase inhibitor (AI) during the 12-month reporting period.

NQF / PQRI Number	Clinical Quality Measure Title and Description
NQF 0385 PQRI 72	Title: Oncology Colon Cancer: Chemotherapy for Stage III Colon Cancer Patients Description: Percentage of patients aged 18 years and older with Stage IIIA through IIIC colon cancer who are referred for adjuvant chemotherapy, prescribed adjuvant chemotherapy, or have previously received adjuvant chemotherapy within the 12-month reporting period.
NQF 0389 PQRI 102	Title: Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients Description: Percentage of patients, regardless of age, with a diagnosis of prostate cancer at low risk of recurrence receiving interstitial prostate brachytherapy, OR external beam radiotherapy to the prostate, OR radical prostatectomy, OR cryotherapy who did not have a bone scan performed at any time since diagnosis of prostate cancer.
NQF 0027 PQRI 115	Title: Smoking and Tobacco Use Cessation, Medical assistance: a. Advising Smokers and Tobacco Users to Quit, b. Discussing Smoking and Tobacco Use Cessation Medications, c. Discussing Smoking and Tobacco Use Cessation Strategies Description: Percentage of patients 18 years of age and older who were current smokers or tobacco users, who were seen by a practitioner during the measurement year and who received advice to quit smoking or tobacco use or whose practitioner recommended or discussed smoking or tobacco use cessation medications, methods or strategies.
NQF 0055 PQRI 117	Title: Diabetes: Eye Exam Description: Percentage of patients 18 -75 years of age with diabetes (type 1 or type 2) who had a retinal or dilated eye exam or a negative retinal exam (no evidence of retinopathy) by an eye care professional.
NQF 0062 PQRI 119	Title: Diabetes: Urine Screening Description: Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had a nephropathy screening test or evidence of nephropathy.
NQF 0421 PQRI 128	Title: Adult Weight Screening and Follow-Up Description: Percentage of patients aged 18 years and older with a calculated BMI in the past six months or during the current visit documented in the medical record AND if the most recent BMI is outside parameters, a follow-up plan is documented.
NQF 0056 PQRI 163	Title: Diabetes: Foot Exam Description: The percentage of patients aged 18 - 75 years with diabetes (type 1 or type 2) who had a foot exam (visual inspection, sensory exam with monofilament, or pulse exam).
NQF 0074 PQRI 197	Title: Coronary Artery Disease (CAD): Drug Therapy for Lowering LDL-Cholesterol Description: Percentage of patients aged 18 years and older with a diagnosis of CAD who were prescribed a lipid-lowering therapy (based on current ACC/AHA guidelines).
NQF 0084 PQRI 200	Title: Heart Failure (HF): Warfarin Therapy Patients with Atrial Fibrillation Description: Percentage of all patients aged 18 years and older with a diagnosis of heart failure and paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy.
NQF 0073 PQRI 201	Title: Ischemic Vascular Disease (IVD): Blood Pressure Management Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January 1- November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and whose recent blood pressure is in control (<140/90 mmHg).

NQF / PQRI Number	Clinical Quality Measure Title and Description
NQF 0068 PQRI 204	Title: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January 1-November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had documentation of use of aspirin or another antithrombotic during the measurement year.
NQF 0004	Title: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment: (a) Initiation, (b) Engagement Description: The percentage of adolescent and adult patients with a new episode of alcohol and other drug (AOD) dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis and who initiated treatment and who had two or more additional services with an AOD diagnosis within 30 days of the initiation visit.
NQF 0012	Title: Prenatal Care: Screening for Human Immunodeficiency Virus (HIV) Description: Percentage of patients, regardless of age, who gave birth during a 12-month period who were screened for HIV infection during the first or second prenatal care visit.
NQF 0013	Title: Hypertension: Blood Pressure Measurement Description: Percentage of patient visits for patients aged 18 years and older with a diagnosis of hypertension who have been seen for at least 2 office visits, with blood pressure (BP) recorded.
NQF 0014	Title: Prenatal Care: Anti-D Immune Globulin Description: Percentage of D (Rh) negative, unsensitized patients, regardless of age, who gave birth during a 12-month period who received anti-D immune globulin at 26-30 weeks gestation.
NQF 0018	Title: Controlling High Blood Pressure Description: The percentage of patients 18-85 years of age who had a diagnosis of hypertension and whose BP was adequately controlled during the measurement year
NQF 0024	Title: Weight Assessment and Counseling for Children and Adolescents Description: Percentage of patients 2 -17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or OB/GYN and who had evidence of BMI percentile documentation, counseling for nutrition and counseling for physical activity during the measurement year.
NQF 0028	Title: Preventive Care and Screening Measure Pair: a. Tobacco Use Assessment, b. Tobacco Cessation Intervention Description: Percentage of patients aged 18 years and older who have been seen for at least 2 office visits who were queried about tobacco use one or more times within 24 months b. Percentage of patients aged 18 years and older identified as tobacco users within the past 24 months and have been seen for at least 2 office visits, who received cessation intervention.
NQF 0032	Title: Cervical Cancer Screening Description: Percentage of women 21-64 years of age, who received one or more Pap tests to screen for cervical cancer
NQF 0033	Title: Chlamydia Screening for Women Description: Percentage of women 15- 24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.
NQF 0036	Title: Use of Appropriate Medications for Asthma Description: Percentage of patients 5 - 50 years of age who were identified as having persistent asthma and were appropriately prescribed medication during the measurement year. Report three age stratifications (5-11 years, 12-50 years, and total).

NQF / PQRI Number	Clinical Quality Measure Title and Description
NQF 0038	Title: Childhood Immunization Status Description: Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio(IPV), one measles, ,mumps and rubella (MMR); two H influenza type B (HiB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); two hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates.
NQF 0052	Title: Low Back Pain: Use of Imaging Studies Description: Percentage of patients with a primary diagnosis of low back pain who did not have an imaging study (plain x-ray, MRI, CT scan) within 28 days of diagnosis.
NQF 0075	Title: Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal angioplasty (PTCA) from January 1-November1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had a complete lipid profile performed during the measurement year and whose LDL-C<100 mg/dL.
NQF 0575	Title: Diabetes: Hemoglobin A1c Control (<8.0%) Description: The percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c <8.0%.

Registration and Attestation / Reporting to CMS / Documentation

EPs, or someone acting on behalf of an EP, can register for the Medicare EHR incentive program at any time via an online registration process provided by CMS. After the EHR reporting period, the EP, or someone acting on behalf of the EP, uses that same CMS website to "attest" to compliance with the various requirements of the program. EPs must keep documentation supporting their demonstration of meaningful use for six years for CMS' auditing purposes.

For 2011, the EP attestation process includes filling in numerators and denominators for the functional measures and clinical quality measures, indicating if they qualify for exclusions to specific objectives, and so on. The attestation process is detailed in guidance provided by CMS.

For 2012, CMS originally intended that the functional measures would still be reported via attestation with the lone exception of the clinical quality measures piece, which would have been reported electronically through one of three options. However, CMS proposed to change that plan in the July 19, 2011 Physician Fee Schedule proposed rule due to technical infeasibility for CMS to capture the reports electronically. Instead, EPs will still report everything via attestation and CMS will initiate a pilot to test initial electronic reporting options.

Certified EHR Technology

EPs must use "Certified EHR Technology" in order to participate in the meaningful use program. *Certified EHR Technology* means either (1) a Complete EHR that meets the definition of a Qualified EHR and has been tested and certified in accordance with the ONC certification program as having met all applicable certification criteria; or (2) a combination of EHR Modules in which each constituent EHR Module of the combination has been tested and certified in accordance with the ONC certification program as having met all applicable certification criteria, and the resultant combination also meets the requirements included in the definition of a Qualified EHR. *Qualified EHR* means an electronic record of health-related information on an individual that: (A) Includes patient demographic and clinical health information, such as medical history and problem lists; and (B) has the capacity: (i) To provide clinical decision support; (ii) to support physician order entry; (iii) to capture and query information relevant to

health care quality; and (iv) to exchange electronic health information with, and integrate such information from other sources.

Complete EHRs must meet all applicable ONC certification criteria. *EHR Modules* can be any service, component, or combination thereof that is tested and certified as fulfilling the requirements of at least one certification criterion. Complete EHRs and EHR Modules must be tested/certified by authorized bodies, per the temporary certification program regulations issued by ONC in June 2010—which will sunset after 2011—and the permanent certification program regulations issued in January 2011. HIT products can fulfill various clinical and administrative functions above and beyond the base requirements of the ONC's EHR certification criteria—any additional functions that are outside the scope of the program are simply not a factor in the testing/certification process. **As of this writing, there is at least one RIS that is certified as an EHR Module and at least two advanced RIS products ("radiology EHRs") that have been certified as Complete EHRs – these can be found here (see "ambulatory" section)**.

It is important to note that EHR Modules must also be certified for all applicable privacy/security criteria unless the module is presented for testing and certification as part of a pre-coordinated bundle of EHR Modules in which the privacy/security criteria are covered elsewhere in the bundle; or the presenter can demonstrate and provide documentation that a particular privacy/security criterion is inapplicable or technically infeasible.

Presenting a product to an authorized body for testing and certification is generally considered the purview of the developer of the product—and in the cases of the radiology EHRs described above, that is exactly what happened—however, anyone is technically able to do this, including consumers. The presenter of the product must cover the total costs of the testing and certification process, so EPs are generally unlikely to consider self-presentation as a financially viable option.

It is the EP's responsibility to ensure their combination of certified EHR Modules covers all applicable criteria necessary for that combination to meet the regulatory definition of certified EHR technology. ONC provides the Certified HIT Products List (CHPL) website (see "ambulatory") to assist EPs in determining that their respective combination of multiple certified EHR Modules adequately meets the regulatory definition of certified EHR technology. The CHPL has a shopping cart-like function to provide participants with their CMS EHR Certification ID number for use during registration/attestation. The CHPL is a growing list that will continue to be updated over time as more and more solutions achieve certification.

An EP's combination of individually certified EHR Modules does not need to be submitted for testing, although comprehensive combinations of modular products can technically be submitted for testing and certification as a Complete EHR instead of testing/certifying the individual component products as EHR Modules. However, the combination must remain intact to preserve its Complete EHR certification status, and if the combination is disassembled or modified, the constituent products are not then considered to be individual certified EHR Modules.

The following two tables show the general (Table 7) and ambulatory (Table 8) certification criteria, standards, and implementation specifications. As previously mentioned, Complete EHRs for EPs would be tested and certified against the criteria in both tables; EHR Modules for EPs would be tested and certified against one or more criteria (plus applicable privacy/security criteria). Note that ONC also provides criteria for inpatient EHRs; however, those technologies are for eligible hospitals, not EPs, and are not the subject of this summary.

TABLE 7: General certification criteria, standards, and implementation specifications for Complete EHRs or EHR Modules (Referenced standards and implementation specifications are included in red font)

General certification criteria with corresponding standards and implementation specifications	
Drug-drug, drug-allergy interaction checks	(1) Notifications. Automatically and electronically generate and indicate in real-time, notifications at the point of care for drug-drug and drug-allergy contraindications based on medication list, medication allergy list, and computerized provider order entry (CPOE). (2) Adjustments. Provide certain users with the ability to adjust notifications provided for drug-drug and drug-allergy interaction checks.
Drug formulary checks	Enable a user to electronically check if drugs are in a formulary or preferred drug list.
Maintain up-to-date problem list	Enable a user to electronically record, modify, and retrieve a patient's problem list for longitudinal care in accordance with: (1) The standard specified in §170.207(a)(1) [code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions]; or (2) At a minimum, the version of the standard specified in §170.207(a)(2) [IHTSDO SNOMED CT July 2009 version].
Maintain active medication list	Enable a user to electronically record, modify, and retrieve a patient's active medication list as well as medication history for longitudinal care.
Maintain active medication allergy list.	Enable a user to electronically record, modify, and retrieve a patient's active medication allergy list as well as medication allergy history for longitudinal care.
Record and chart vital signs	(1) Vital signs. Enable a user to electronically record, modify, and retrieve a patient's vital signs including, at a minimum, height, weight, and blood pressure. (2) Calculate body mass index. Automatically calculate and display body mass index (BMI) based on a patient's height and weight. (3) Plot and display growth charts. Plot and electronically display, upon request, growth charts for patients 2-20 years old.
Smoking status	Enable a user to electronically record, modify, and retrieve the smoking status of a patient. Smoking status types must include: current every day smoker; current some day smoker; former smoker; never smoker; smoker, current status unknown; and unknown if ever smoked.
Incorporate laboratory test results	(1) Receive results. Electronically receive clinical laboratory test results in a structured format and display such results in human readable format. (2) Display test report information. Electronically display all the information for a test report specified at 42 CFR 493.1291(c)(1) through (7). (3) Incorporate results. Electronically attribute, associate, or link a laboratory test result to a laboratory order or patient record.

General certification criteria with corresponding standards and implementation specifications	
Generate patient lists	Enable a user to electronically select, sort, retrieve, and generate lists of patients according to, at a minimum, the data elements included in: (1) Problem list; (2) Medication list; (3) Demographics; and (4) Laboratory test results.
Medication reconciliation	Enable a user to electronically compare two or more medication lists.
Submission to immunization registries	Electronically record, modify, retrieve, and submit immunization information in accordance with: (1) The standard (and applicable implementation specifications) specified in §170.205(e)(1) [standard: HL7 2.3.1; implementation specification: Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the HL7 Standard Protocol Implementation Guide Version 2.2]or §170.205(e)(2) [standard: HL7 2.5.1; implementation specifications. HL7 2.5.1 Implementation Guide for Immunization Messaging Release 1.0]; and (2) At a minimum, the version of the standard specified in §170.207(e) [HL7 Standard Code Set CVX - Vaccines Administered, July 30, 2009 version].
Public health surveillance	Electronically record, modify, retrieve, and submit syndrome-based public health surveillance information in accordance with the standards specified in §170.205(d)(1) [HL7 2.3.1] or §170.205(d)(2) [standard: HL7 2.5.1].
Patient-specific education resources.	Enable a user to electronically identify and provide patient-specific education resources according to, at a minimum, the data elements included in the patient's: problem list; medication list; and laboratory test results; as well as provide such resources to the patient.
Automated measure calculation	For each meaningful use objective with a percentage-based measure, electronically record the numerator and denominator and generate a report including the numerator, denominator, and resulting percentage associated with each applicable meaningful use measure.
Access control	Assign a unique name and/or number for identifying and tracking user identity and establish controls that permit only authorized users to access electronic health information.
Emergency access	Permit authorized users (who are authorized for emergency situations) to access electronic health information during an emergency.
Automatic log-off	Terminate an electronic session after a predetermined time of inactivity.

General certification criteria with corresponding standards and implementation specifications	
Audit log	(1) Record actions. Record actions related to electronic health information in accordance with the standard specified in §170.210(b) [Record actions related to electronic health information. The date, time, patient identification, and user identification must be recorded when electronic health information is created, modified, accessed, or deleted; and an indication of which action(s) occurred and by whom must also be recorded]. (2) Generate audit log. Enable a user to generate an audit log for a specific time period and to sort entries in the audit log according to any of the elements specified in the standard at §170.210(b) [Record actions related to electronic health information. The date, time, patient identification, and user identification must be recorded when electronic health information is created, modified, accessed, or deleted; and an indication of which action(s) occurred and by whom must also be recorded].
Integrity	(1) Create a message digest in accordance with the standard specified in §170.210(c) [Verification that electronic health information has not been altered in transit. A hashing algorithm with a security strength equal to or greater than SHA-1 (Secure Hash Algorithm (SHA-1) as specified by the National Institute of Standards and Technology (NIST) in FIPS PUB 180-3 (October, 2008)) must be used to verify that electronic health information has not been altered]. (2) Verify in accordance with the standard specified in §170.210(c) [Verification that electronic health information has not been altered in transit. A hashing algorithm with a security strength equal to or greater than SHA-1 (Secure Hash Algorithm (SHA-1) as specified by the National Institute of Standards and Technology (NIST) in FIPS PUB 180-3 (October, 2008)) must be used to verify that electronic health information has not been altered] upon receipt of electronically exchanged health information that such information has not been altered. (3) Detection. Detect the alteration of audit logs.
Authentication	Verify that a person or entity seeking access to electronic health information is the one claimed and is authorized to access such information.
General encryption	Encrypt and decrypt electronic health information in accordance with the standard specified in §170.210(a)(1) [Any encryption algorithm identified by NIST as an approved security function in Annex A of the FIPS Publication 140-2], unless the Secretary determines that the use of such algorithm would pose a significant security risk for Certified HER Technology.
Encryption when exchanging electronic health information	Encrypt and decrypt electronic health information when exchanged in accordance with the standard specified in §170.210(a)(2) [Any encrypted and integrity protected link].
Optional. Accounting of disclosures	Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in §170.210(d) [The date, time, patient identification, user identification, and a description of the disclosure must be recorded for disclosures for treatment, payment, and health care operations, as these terms are defined at 45 CFR 164.501].

TABLE 8: Specific certification criteria, standards, and implementation specifications for Complete EHRs or EHR Modules designed for an ambulatory setting (Referenced standards and implementation specifications are included in red font)

Ambulatory certification criteria with corresponding standards and implementation specifications	
Computerized provider order entry	Enable a user to electronically record, store, retrieve, and modify, at a minimum, the following order types: (1) Medications; (2) Laboratory; and (3) Radiology/imaging.
Electronic prescribing	Enable a user to electronically generate and transmit prescriptions and prescription-related information in accordance with: (1) The standard specified in §170.205(b)(1) [NCPDP Prescriber/Pharmacist Interface SCRIPT standard, Implementation Guide, Version 8, Release 1 (Version 8.1) October 2005] or §170.205(b)(2) [NCPDP SCRIPT Standard, Implementation Guide, Version 10.6]; and (2) The standard specified in §170.207(d) [any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the NLM].
Record demographics	Enable a user to electronically record, modify, and retrieve patient demographic data including preferred language, gender, race, ethnicity, and date of birth. Enable race and ethnicity to be recorded in accordance with the standard specified at §170.207(f) [OMB Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity, Statistical Policy Directive No. 15, October 30, 1997].
Patient reminders	Enable a user to electronically generate a patient reminder list for preventive or follow-up care according to patient preferences based on, at a minimum, the data elements included in: (1) Problem list; (2) Medication list; (3) Medication allergy list; (4) Demographics; and (5) Laboratory test results.
Clinical decision support	(1) Implement rules. Implement automated, electronic clinical decision support rules (in addition to drug-drug and drug-allergy contraindication checking) based on the data elements included in: problem list; medication list; demographics; and laboratory test results. (2) Notifications. Automatically and electronically generate and indicate in real-time, notifications and care suggestions based upon clinical decision support rules.

Ambulatory certification criteria with corresponding standards and implementation specifications	
Electronic copy of health information	Enable a user to create an electronic copy of a patient's clinical information, including, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list in: (1) Human readable format; and (2) On electronic media or through some other electronic means in accordance with: (i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) [standard: HL7 CDA Release 2, Continuity of CCD; implementation specifications: HITSP Summary Documents Using HL7 CCD Component HITSP/C32] or §170.205(a)(2) [ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369]; and (ii) For the following data elements the applicable standard must be used: (A) Problems. The standard specified in §170.207(a)(1) [the code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions] or, at a minimum, the version of the standard specified in §170.207(a)(2) [IHTSDO SNOMED CT July 2009 version]; (B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c) [LOINC version 2.27, when such codes were received within an electronic transaction from a laboratory]; and (C) Medications. The standard specified in §170.207(d) [Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the NLM].
Timely access	Enable a user to provide patients with online access to their clinical information, including, at a minimum, lab test results, problem list, medication list, and medication allergy list.

Ambulatory certification criteria with corresponding standards and implementation specifications	
Clinical summaries	Enable a user to provide clinical summaries to patients for each office visit that include, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list. If the clinical summary is provided electronically it must be: (1) Provided in human readable format; and (2) Provided on electronic media or through some other electronic means in accordance with: (i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) [standard: HL7 CDA Release 2, Continuity of CCD (incorporated by reference in §170.299); implementation specifications: HITSP Summary Documents Using HL7 CCD Component HITSP/C32] or §170.205(a)(2) [ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369]; and (ii) For the following data elements the applicable standard must be used: (A) Problems. The standard specified in §170.207(a)(1) [the code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions] or, at a minimum, the version of the standard specified in §170.207(a)(2) [IHTSDO SNOMED CT July 2009 version]; (B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c) [LOINC version 2.27, when such codes were received within an electronic transaction from a laboratory]; and (C) Medications. The standard specified in §170.207(d) [Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the NLM].

Ambulatory certification criteria with corresponding standards and implementation specifications	
Exchange clinical information and patient summary record	(1) Electronically receive and display. Electronically receive and display a patient's summary record, from other providers and organizations including, at a minimum, diagnostic tests results, problem list, medication list, and medication allergy list in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) [standard: HL7 CDA Release 2, Continuity of CCD (incorporated by reference in §170.299); implementation specifications: HITSP Summary Documents Using HL7 CCD Component HITSP/C32] or §170.205(a)(2) [ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369]. Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format. (2) Electronically transmit. Enable a user to electronically transmit a patient summary record to other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list in accordance with: (i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) [standard: HL7 CDA Release 2, Continuity of CCD (incorporated by reference in §170.299); implementation specifications: HITSP Summary Documents Using HL7 CCD Component HITSP/C32] or §170.205(a)(2) [ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369]; and (ii) For the following data elements the applicable standard must be used: (A) Problems. The standard specified in §170.207(a)(1) [the code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions] or, at a minimum, the version of the standard specified in §170.207(a)(2) [IHTSDO SNOMED CT July 2009 version]; (B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c) [LOINC version 2.27, when such codes were received within an electronic transaction from a laboratory]; and (C) Medications. The standard specified in §170.207(d) [Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the NLM].
Calculate and submit clinical quality measures	(1) Calculate (i) Electronically calculate all of the core clinical measures specified by CMS for eligible professionals. (ii) Electronically calculate, at a minimum, three clinical quality measures specified by CMS for eligible professionals, in addition to those clinical quality measures specified in paragraph (1)(i). (2) Submission. Enable a user to electronically submit calculated clinical quality measures in accordance with the standard and implementation specifications specified in §170.205(f) [standard: CMS PQRI 2009 Registry XML Specification; implementation specifications: PQRI Measure Specifications Manual for Claims and Registry].

Federal Resources

- CMS Meaningful Use Website
- CMS Registration Website
- ONC Meaningful Use Website
- ONC CHPL Website
- ONC Regional Extension Centers

- CMS Final Rule on Meaningful Use
- CMS Correction Notice on Meaningful Use
- ONC Final Rule on EHR Certification Criteria, Standards, and Implementation Specifications
- ONC Interim Final Rule to Remove Specifications for Public Health Surveillance Criterion
- ONC Temporary Certification Program Final Rule
- ONC Permanent Certification Program Final Rule

ACR Resources

- ACR's Meaningful Use Resource Center
- ACR's Radiology and Health IT Blog

ACR Contact

The ACR IT and Informatics Committee/Government Relations Committee will continue to be actively engaged with CMS and ONC on meaningful use issues moving into the Stage 2 and 3 rulemakings. As always, ACR is interested in hearing directly from members. Please contact Michael Peters, Director of Legislative and Regulatory Affairs, ACR Government Relations Department, at mpeters@acr.org or 202-223-1670 if you have any questions or suggestions.