



Stage 1 Meaningful Use Objectives, Measures, and Corresponding Initial Set of Standards, Implementation Specifications, and Certification Criteria

IN JULY 2010 the US Department of Health and Human Services issued a final rule on the Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology in conjunction with its final rule on the meaningful use EHR incentive program. The standards rule establishes the system capabilities and related standards and implementation specifications that EHR technology must include, at a minimum, to support the stage 1 meaningful objectives set for eligible professionals and hospitals.

Eligible professionals and hospitals must use technology that meets these requirements. Organizations authorized by HHS will test and certify both complete EHRs and EHR modules according to the criteria to ensure that they have properly implemented adopted the standards and implementation specifications and otherwise comply with the criteria within the rule.

The following table maps the specified criteria, standards, and specifications to the meaningful use outcome priorities, objectives, and measures.

CORE SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
Improving quality, safety, efficiency, and reducing health disparities	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 30% of unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one medication order entered using CPOE	§170.304(a) and §170.306(a) <u>Computerized provider order entry.</u> 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.		

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	Eligible Professionals	Eligible Hospitals and CAHs				
	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	<p>§170.302(a) <u>Drug-drug, drug-allergy interaction checks.</u> (1) <u>Notifications.</u> 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) <u>Adjustments.</u> Provide certain users with the ability to adjust notifications provided for drug-drug and drug-allergy interaction checks.</p>		

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	Generate and transmit permissible prescriptions electronically (eRx)	N/A	More than 40% of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology	<p>§170.304(b) <u>Electronic prescribing</u>. Enable a user to electronically generate and transmit prescriptions and prescription-related information in accordance with:</p> <p>(1) The standard specified in §170.205(b)(1) or §170.205(b)(2); and (2) The standard specified in §170.207(d).</p>	<p>§170.205(b) <u>Electronic prescribing</u>.</p> <p>(1) <u>Standard</u>. The National Council for the Prescription Drug Programs (NCPDP) Prescriber/Pharmacist Interface SCRIPT standard, Implementation Guide, Version 8, Release 1 (Version 8.1) October 2005 (incorporated by reference in §170.299)</p> <p>(2) <u>Standard</u>. NCPDP SCRIPT Standard, Implementation Guide, Version 10.6 (incorporated by reference in §170.299).</p>	<p>§170.207(d) <u>Medications Standard</u>. Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine.</p> <p>NLM has identified the following source vocabularies as being included in RxNorm:</p> <ul style="list-style-type: none"> • GS – Gold Standard Alchemy • MDDB – Medi-Span Master Drug Data Base • MMSL – Multum MediSource Lexicon • MMX – Micromedex DRUGDEX • MSH – Medical Subject Headings (MeSH) • MTHFDA – FDA National Drug Code Directory • NTHSPL – FDA Structured Product Labels • NDDF – First DataBank NDDF Plus Source Vocabulary • NDFRT – Veterans Health Administration National Drug File – Reference Terminology • SNOMED CT – SNOMED Clinical Terms (drug information) • VANDF – Veterans Health Administration National Drug File

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	Record demographics: <ul style="list-style-type: none"> ○ preferred language ○ gender ○ race ○ ethnicity ○ date of birth 	Record demographics: <ul style="list-style-type: none"> ○ 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	§170.304(c) and §170.306(b) <u>Record demographics.</u> Enable a user to electronically record, modify, and retrieve patient demographic data including preferred language, gender, race, ethnicity, and date of birth <i>[and date and preliminary cause of death in the event of mortality for eligible hospitals and CAHs]</i> . Enable race and ethnicity to be recorded in accordance with the standard specified at §170.207(f).		§170.207(f) <u>Race and Ethnicity. Standard.</u> The Office of Management and Budget Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity, Statistical Policy Directive No. 15, October 30, 1997 (available at http://www.whitehouse.gov/omb/rewrite/fedreg/ombdir15.html).
	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 department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data	§170.302(c) <u>Maintain up-to-date problem list.</u> Enable a user to electronically record, modify, and retrieve a patient's problem list for longitudinal care in accordance with: <ol style="list-style-type: none"> (1) The standard specified in §170.207(a)(1); or (2) At a minimum, the version of the standard specified in §170.207(a)(2). 		§170.207(a) <u>Problems. (1) Standard.</u> The code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions (ICD-9-CM, Vol. 1 & 2). (2) <u>Standard.</u> International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299).

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	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 department (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data	§170.302(d) <u>Maintain active medication list.</u> Enable a user to electronically record, modify, and retrieve a patient's active medication list as well as medication history for longitudinal care.		ONC removed the requirement to use RxNorm.
	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 department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data	§170.302(e) <u>Maintain active medication allergy list.</u> 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 changes in vital signs: <ul style="list-style-type: none"> ○ 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: <ul style="list-style-type: none"> ○ 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), [record] height, weight and blood pressure are recorded as structured data	§170.302(f) <u>Record and chart vital signs.</u> (1) <u>Vital signs.</u> Enable a user to electronically record, modify, and retrieve a patient's vital signs including, at a minimum, height, weight, and blood pressure. (2) <u>Calculate body mass index.</u> Automatically calculate and display body mass index (BMI) based on a patient's height and weight. (3) <u>Plot and display growth charts.</u> Plot and electronically display, upon request, growth charts for patients 2-20 years old.		

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	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 emergency department (POS 21 or 23) have smoking status recorded as structured data	§170.302(g) <u>Smoking status</u> . 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.		The fields associated with this measure mirror those expressed in the Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey related to smoking status recodes.
	Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance with that rule	Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule	Implement one clinical decision support rule	§170.304(e) and §170.306(c) <u>Clinical decision support</u> – (1) <u>Implement rules</u> . 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) <u>Notifications</u> . Automatically and electronically generate and indicate in real-time, notifications and care suggestions based upon clinical decision support rules.		

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	Report ambulatory clinical quality measures to CMS or the States	Report hospital clinical quality measures to CMS or the States	<p>For 2011, provide aggregate numerator, denominator, and exclusions through attestation as discussed in section II(A)(3) of the EHR Incentive Program final rule</p> <p>For 2012, electronically submit the clinical quality measures as discussed in section II(A)(3) of the EHR Incentive Program final rule</p>	<p>§170.304(j) and §170.306(i) <u>Calculate and submit clinical quality measures</u>—</p> <p>(1) <u>Calculate</u> (i) Electronically calculate all of the core clinical measures specified by CMS for eligible professionals <i>[and eligible hospitals and critical access hospitals]</i>.</p> <p>(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).</p> <p>(2) <u>Submission</u>. Enable a user to electronically submit calculated clinical quality measures in accordance with the standard and implementation specifications specified in §170.205(f).</p>	<p>§170.205(f) <u>Quality reporting. Standard.</u> The CMS Physician Quality Reporting Initiative (PQRI) 2009 Registry XML Specification (incorporated by reference in §170.299). <u>Implementation specifications.</u> Physician Quality Reporting Initiative Measure Specifications Manual for Claims and Registry (incorporated by reference in §170.299).</p>	

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Engage patients and families in their health care	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request	More than 50% of all patients of the EP or 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 3 business days	<p>§170.304(f) <u>Electronic copy of health information.</u> 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:</p> <p>(1) Human readable format; and</p> <p>(2) On electronic media or through some other electronic means in accordance with:</p> <p>(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and (ii) For the following data elements the applicable standard must be used:</p> <p>(A) <u>Problems.</u> The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);</p> <p>(B) <u>Laboratory test results.</u> At a minimum, the version of the standard specified in §170.207(c); and</p> <p>(C) <u>Medications.</u> The standard specified in §170.207(d).</p> <p><i>(continued on next page)</i></p>	<p>§170.205(a) <u>Patient summary record.</u></p> <p>(1) <u>Standard.</u> Health Level Seven Clinical Document Architecture (CDA) Release 2, Continuity of Care Document (CCD) (incorporated by reference in §170.299). Implementation specifications. The Healthcare Information Technology Standards Panel (HITSP) Summary Documents Using HL7 CCD Component HITSP/C32 (incorporated by reference in §170.299).</p> <p>(2) <u>Standard.</u> ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369 (incorporated by reference in §170.299).</p>	<p>§170.207(a) <u>Problems.</u></p> <p>(1) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions (ICD-9-CM, Vol. 1 & 2).</p> <p>(2) <u>Standard.</u> International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299).</p> <p>§170.207(c) <u>Laboratory test results. Standard.</u></p> <p>Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299).</p> <p>§170.207(d) <u>Medications. Standard.</u> Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine.</p>

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	<p>Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request</p> <p><i>(continued from previous page)</i></p>	<p>Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request</p> <p><i>(continued from previous page)</i></p>	<p>More than 50% of all patients of the EP or 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 3 business days</p> <p><i>(continued from previous page)</i></p>	<p>§170.306(d) <u>Electronic copy of health information.</u> (1) Enable a user to create an electronic copy of a patient’s clinical information, including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, and procedures: (i) In human readable format; and (ii) On electronic media or through some other electronic means in accordance with: (A) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and (B) For the following data elements the applicable standard must be used: (1) <u>Problems.</u> The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2); (2) <u>Procedures.</u> The standard specified in §170.207(b)(1) or §170.207(b)(2); (3) <u>Laboratory test results.</u> At a minimum, the version of the standard specified in §170.207(c); and (4) <u>Medications.</u> The standard specified in §170.207(d). (2) Enable a user to create an electronic copy of a patient’s discharge summary in human readable format and on electronic media or through some other</p>	<p>§170.205(a) <u>Patient summary record.</u> (1) <u>Standard.</u> Health Level Seven Clinical Document Architecture (CDA) Release 2, Continuity of Care Document (CCD) (incorporated by reference in §170.299). Implementation specifications. The Healthcare Information Technology Standards Panel (HITSP) Summary Documents Using HL7 CCD Component HITSP/C32 (incorporated by reference in §170.299). (2) <u>Standard.</u> ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369 (incorporated by reference in §170.299). ONC is not requiring the use of any standard for the discharge summary section. In order to support the meaningful use objective and measure, ONC expects Certified EHR Technology to be capable of providing an electronic copy of a discharge summary like a patient summary record, in human readable format and on electronic media or through some other electronic means. Other electronic means could include, for example, the discharge summary represented as a CCD plus the “Hospital Course” CDA section</p>	<p>§170.207(a) <u>Problems.</u> (1) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions (ICD-9-CM, Vol. 1 & 2). (2) <u>Standard.</u> International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299). §170.207(b) <u>Procedures.</u> (1) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(2) (ICD-9-CM, Vol. 3 Procedures); (2) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(5) (the combination of HCPCS and CPT-4). §170.207(c) <u>Laboratory test results. Standard.</u> Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299). §170.207(d) <u>Medications. Standard.</u> Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs</p>

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	Eligible Professionals	Eligible Hospitals and CAHs				
	N/A	Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request	More than 50% of all patients who are discharged from an eligible hospital or CAH's inpatient department or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it	§170.306(e) <u>Electronic copy of discharge instructions</u> . Enable a user to create an electronic copy of the discharge instructions for a patient, in human readable format, at the time of discharge on electronic media or through some other electronic means.		

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	Provide clinical summaries for patients for each office visit	N/A	Clinical summaries provided to patients for more than 50% of all office visits within 3 business days	<p>§170.304(h) <u>Clinical summaries</u>. 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:</p> <p>(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) or §170.205(a)(2); and (ii) For the following data elements the applicable standard must be used:</p> <p>(A) <u>Problems</u>. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);</p> <p>(B) <u>Laboratory test results</u>. At a minimum, the version of the standard specified in §170.207(c); and (C) <u>Medications</u>. The standard specified in §170.207(d).</p>	<p>§170.205(a) <u>Patient summary record</u>. (1) <u>Standard</u>. Health Level Seven Clinical Document Architecture (CDA) Release 2, Continuity of Care Document (CCD) (incorporated by reference in §170.299). Implementation specifications. The Healthcare Information Technology Standards Panel (HITSP) Summary Documents Using HL7 CCD Component HITSP/C32 (incorporated by reference in §170.299). (2) <u>Standard</u>. ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369 (incorporated by reference in §170.299).</p>	<p>§170.207(a) <u>Problems</u>. (1) <u>Standard</u>. The code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions (ICD-9-CM, Vol. 1 & 2). (2) <u>Standard</u>. International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299).</p> <p>§170.207(c) <u>Laboratory test results</u>. <u>Standard</u>. Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299).</p> <p>§170.207(d) <u>Medications</u>. <u>Standard</u>. Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine.</p>

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Improve care coordination	Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information	<p>§170.304(i) and §170.306(f) <u>Exchange clinical information and patient summary record</u> –</p> <p>(1) <u>Electronically receive and display</u>. 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 [and procedures for eligible hospitals and CAHs] in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2). Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format.</p> <p>(2) <u>Electronically transmit</u>. 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 [and procedures for eligible hospitals and CAHs] in accordance with: (i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and (ii) For the following data elements the applicable standard must be used:</p> <p>(A) <u>Problems</u>. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);</p> <p>(B) <u>Laboratory test results</u>. At a minimum, the version of the standard specified in §170.207(c); and</p> <p>(C) <u>Procedures (for eligible hospitals and CAHs)</u>. The standard specified in §170.207(b)(1) or §170.207(b)(2)</p>	<p>§170.205(a) <u>Patient summary record</u>.</p> <p>(1) <u>Standard</u>. Health Level Seven Clinical Document Architecture (CDA) Release 2, Continuity of Care Document (CCD) (incorporated by reference in §170.299). Implementation specifications. The Healthcare Information Technology Standards Panel (HITSP) Summary Documents Using HL7 CCD Component HITSP/C32 (incorporated by reference in §170.299).</p> <p>(2) <u>Standard</u>. ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369 (incorporated by reference in §170.299).</p>	<p>§170.207(a) <u>Problems</u>.</p> <p>(1) <u>Standard</u>. The code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions (ICD-9-CM, Vol. 1 & 2).</p> <p>(2) <u>Standard</u>. International Health Terminology Standards Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299).</p> <p>§170.207(b) <u>Procedures</u>.</p> <p>(1) <u>Standard</u>. The code set specified at 45 CFR 162.1002(a)(2) (ICD-9-CM, Vol. 3 Procedures);</p> <p>(2) <u>Standard</u>. The code set specified at 45 CFR 162.1002(a)(5) (the combination of HCPCS and CPT-4).</p> <p>§170.207(c) <u>Laboratory test results</u>. <u>Standard</u>. Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299).</p> <p>§170.207(d) <u>Medications</u>. <u>Standard</u>. Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States</p>

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	Eligible Professionals	Eligible Hospitals and CAHs				
Ensure adequate privacy and security protections for personal health information	<p>Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities</p> <p><i>(continued on next page)</i></p>	<p>Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities</p> <p><i>(continued on next page)</i></p>	<p>Conduct or review a security risk analysis per 45 CFR 164.308 (a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process</p> <p><i>(continued on next page)</i></p>	<p>§170.302(o) <u>Access control.</u> 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.</p> <p>§170.302(p) <u>Emergency access.</u> Permit authorized users (who are authorized for emergency situations) to access electronic health information during an emergency.</p> <p>§170.302(q) <u>Automatic log-off.</u> Terminate an electronic session after a predetermined time of inactivity.</p> <p>§170.302(r) <u>Audit log.</u> (1) <u>Record actions.</u> Record actions related to electronic health information in accordance with the standard specified in §170.210(b). (2) <u>Generate audit log.</u> 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).</p> <p>§170.302(s) <u>Integrity.</u> (1) Create a message digest in accordance with the standard specified in §170.210(c). (2) Verify in accordance with the standard specified in §170.210(c) upon receipt of electronically exchanged health information that such information has not been altered. (3) <u>Detection.</u> Detect the alteration of audit logs.</p>	<p>§170.210(a) <u>Encryption and decryption of electronic health information -</u> (1) <u>General.</u> Any encryption algorithm identified by the National Institute of Standards and Technology (NIST) as an approved security function in Annex A of the Federal Information Processing Standards (FIPS) Publication 140-2 (incorporated by reference in §170.299). (2) <u>Exchange.</u> Any encrypted and integrity protected link.</p> <p>§170.210(b) <u>Record actions related to electronic health information.</u> 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.</p> <p><i>(continued on next page)</i></p>	

Stage 1 Meaningful Use Objectives, Measures, and Corresponding Initial Set of Standards, Implementation Specifications, and Certification Criteria

CORE SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities <i>(continued from previous page)</i>	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities <i>(continued from previous page)</i>	Conduct or review a security risk analysis per 45 CFR 164.308 (a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process <i>(continued from previous page)</i>	§170.302(t) <u>Authentication</u> . Verify that a person or entity seeking access to electronic health information is the one claimed and is authorized to access such information. §170.302 (u) <u>General encryption</u> . Encrypt and decrypt electronic health information in accordance with the standard specified in §170.210(a)(1), unless the Secretary determines that the use of such algorithm would pose a significant security risk for Certified EHR Technology. §170.302 (v) <u>Encryption when exchanging electronic health information</u> . Encrypt and decrypt electronic health information when exchanged in accordance with the standard specified in §170.210(a)(2). §170.302 (w) <u>Optional Accounting of disclosures</u> . Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in §170.210(d). <i>(continued from previous page)</i>	§170.210(c) <u>Verification that electronic health information has not been altered in transit</u> . 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. §170.210(d) <u>Record treatment, payment, and health care operations disclosures</u> . 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. <i>(continued from previous page)</i>	

Stage 1 Meaningful Use Objectives, Measures, and Corresponding Initial Set of Standards, Implementation Specifications, and Certification Criteria

MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
Improving quality, safety, efficiency, and reducing health disparities	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 drug formulary for the entire EHR reporting period	§170.302(b) <u>Drug-formulary checks</u> . Enable a user to electronically check if drugs are in a formulary or preferred drug list.	ONC removed any reference to a particular standard because an eligible professional or eligible hospital that does not have external access to a drug formulary would be able to satisfy this meaningful use measure by checking an internally managed drug formulary. ONC notes that eligible professionals who seek to comply with the electronic prescribing requirements associated with Medicare Part D will need to use the NCPDP standard as they do today.	
	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	§170.306(h) <u>Advance directives</u> . Enable a user to electronically record whether a patient has an advance directive.		

Stage 1 Meaningful Use Objectives, Measures, and Corresponding Initial Set of Standards, Implementation Specifications, and Certification Criteria

MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
	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 tests 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 either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data	<p>§170.302(h) <u>Incorporate laboratory test results—</u> (1) <u>Receive results.</u> Electronically receive clinical laboratory test results in a structured format and display such results in human readable format. (2) <u>Display test report information.</u> Electronically display all the information for a test report specified at 42 CFR 493.1291(c)(1) through (7). (3) <u>Incorporate results.</u> Electronically attribute, associate, or link a laboratory test result to a laboratory order or patient record.</p>	<p>42 CFR 493.1291 (c) The test report must indicate the following: (1) For positive patient identification, either the patient's name and identification number, or a unique patient identifier and identification number. (2) The name and address of the laboratory location where the test was performed. (3) The test report date. (4) The test performed. (5) Specimen source, when appropriate. (6) The test result and, if applicable, the units of measurement or interpretation, or both. (7) Any information regarding the condition and disposition of specimens that do not meet the laboratory's criteria for acceptability.</p>	<p>ONC agreed with commenters that they should not require a LOINC code that has been received, to then be displayed. ONC expects Certified EHR Technology to be able to reuse a LOINC code once it has been received and is accessible to Certified EHR Technology. They do not expect Certified EHR Technology will have to crosswalk or map internal or local codes to LOINC codes.</p>
	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition	<p>§170.302(i) <u>Generate patient lists.</u> 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.</p>		

Stage 1 Meaningful Use Objectives, Measures, and Corresponding Initial Set of Standards, Implementation Specifications, and Certification Criteria

MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
	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 were sent an appropriate reminder during the EHR reporting period	§170.304(d) <u>Patient reminders.</u> 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.		
Engage patients and families in their health care	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	More than 10% of all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information	§170.304(g) <u>Timely access.</u> 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.		
	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	§170.302(m) <u>Patient-specific education resources.</u> 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.		

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MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
Improve care coordination	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The 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 emergency department (POS 21 or 23)	§170.302(j) <u>Medication reconciliation</u> . Enable a user to electronically compare two or more medication lists.		

Stage 1 Meaningful Use Objectives, Measures, and Corresponding Initial Set of Standards, Implementation Specifications, and Certification Criteria

MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
	The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The 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	<p>§170.304(i) and §170.306(f) <u>Exchange clinical information and patient summary record</u> –</p> <p>(1) <u>Electronically receive and display.</u> 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 [and procedures for eligible hospitals and CAHs] in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2). Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format.</p> <p>(2) <u>Electronically transmit.</u> 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 [and procedures for eligible hospitals and CAHs] in accordance with: (i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and (ii) For the following data elements the applicable standard must be used:</p> <p>(A) <u>Problems.</u> The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);</p> <p>(B) <u>Laboratory test results.</u> At a minimum, the version of the standard specified in §170.207(c);</p> <p>[(B) <u>Procedures (for eligible hospitals and CAHs).</u> The standard specified in §170.207(b)(1) or §170.207(b)(2)]; and</p>	<p>§170.205(a) <u>Patient summary record.</u></p> <p>(1) <u>Standard.</u> Health Level Seven Clinical Document Architecture (CDA) Release 2, Continuity of Care Document (CCD) (incorporated by reference in §170.299). Implementation specifications. The Healthcare Information Technology Standards Panel (HITSP) Summary Documents Using HL7 CCD Component HITSP/C32 (incorporated by reference in §170.299).</p> <p>(2) <u>Standard.</u> ASTM E2369 Standard Specification for Continuity of Care Record and Adjunct to ASTM E2369 (incorporated by reference in §170.299).</p>	<p>§170.207(a) <u>Problems.</u> (1) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(1) for the indicated conditions (ICD-9-CM, Vol. 1 & 2). (2) <u>Standard.</u> International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299).</p> <p>§170.207(b) <u>Procedures.</u></p> <p>(1) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(2) (ICD-9-CM, Vol. 3 Procedures);</p> <p>(2) <u>Standard.</u> The code set specified at 45 CFR 162.1002(a)(5) (the combination of HCPCS and CPT-4).</p> <p>§170.207(c) <u>Laboratory test results. Standard.</u> Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299).</p> <p>§170.207(d) <u>Medications. Standard.</u> Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine.</p>

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MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
Improve population and public health	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)	§170.302(k) <u>Submission to immunization registries</u> . Electronically record, modify, retrieve, and submit immunization information in accordance with: (1) The standard (and applicable implementation specifications) specified in §170.205(e)(1) or §170.205(e)(2); and (2) At a minimum, the version of the standard specified in §170.207(e).	§170.205(e) <u>Electronic submission to immunization registries</u> . (1) <u>Standard</u> . HL7 2.3.1 (incorporated by reference in §170.299). <u>Implementation specifications</u> . Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the Health Level Seven (HL7) Standard Protocol Implementation Guide Version 2.2 (incorporated by reference in §170.299). (2) <u>Standard</u> . HL7 2.5.1 (incorporated by reference in §170.299). <u>Implementation specifications</u> . HL7 2.5.1 Implementation Guide for Immunization Messaging Release 1.0 (incorporated by reference in §170.299).	§170.207(e) <u>Immunizations. Standard</u> . HL7 Standard Code Set CVX - Vaccines Administered, July 30, 2009 version (incorporated by reference in §170.299).
	N/A	Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)	§170.306(g) <u>Reportable lab results</u> . Electronically record, modify, retrieve, and submit reportable clinical lab results in accordance with the standard (and applicable implementation specifications) specified in §170.205(c) and, at a minimum, the version of the standard specified in §170.207(c).	§170.205(c) <u>Electronic submission of lab results to public health agencies. Standard</u> . HL7 2.5.1 (incorporated by reference in §170.299). <u>Implementation specifications</u> . HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm) (incorporated by reference in §170.299).	§170.207(c) <u>Laboratory test results. Standard</u> . Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299).

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MENU SET						
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures	Certification Criterion	Content Exchange Standards & Implementation Specifications	Vocabulary Standards
	Eligible Professionals	Eligible Hospitals and CAHs				
	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)	§170.302(l) <u>Public health surveillance.</u> Electronically record, modify, retrieve, and submit syndrome-based public health surveillance information in accordance with the standard (and applicable implementation specifications) specified in §170.205(d)(1) or §170.205(d)(2).	§170.205(d) <u>Electronic submission to public health agencies for surveillance or reporting.</u> (1) <u>Standard.</u> HL7 2.3.1(incorporated by reference in §170.299). (2) <u>Standard.</u> HL7 2.5.1 (incorporated by reference in §170.299). <u>Implementation specifications.</u> Public Health Information Network HL7 Version 2.5 Message Structure Specification for National Condition Reporting Final Version 1.0 and Errata and Clarifications National Notification Message Structural Specification (incorporated by reference in §170.299).	
N/A	N/A	N/A	N/A	§170.302(n) <u>Automated measure calculation.</u> 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.		