

Patient Engagement Power Team

Leslie Kelly Hall, Chair: Arien Malec, Jim Hansen and Liz Johnson co-leads, sub-teams

Overall Comments:

Patient Engagement is still evolving/taking shape in practice, in HIT and in Meaningful Use. Subsequently, The HITSC patient engagement power team spent considerable time and energy determining what commentary would qualify as in scope and what would not. The team returned to the overarching CMS theme of "Engaging Patients and Their Families in Care" and focused on ensuring Meaningful Use 2 standards meet current opportunities as well as anticipate future policy that encourages engagement. In the case where standards exist and policy does not, we recommend modifications to standards to encourage engagement. Conversely where policy exists and standards do not exist, we are suggesting standards be defined as a requirement of Meaningful Use 2. Finally, where standards are required, and not yet defined, the standards developed should include patient-facing systems and patient and/or patient designee(s) as roles within the standard. This will provide HIT vendors the opportunity for development efficiencies and encourage innovative thinking.

The comments will incorporate innovation(?) in three ways: 1) **Overarching principles of patient engagement**, 2) **Specific themes or rationale for changes**, 3) **Specific recommendations for the standards**: specific reasons behind comments are consistent across many of the objectives. For clarity, however, we have highlighted the most relevant. We encourage the review all specific rationale in relation to each objective. The goal is to inform future objectives and standards as a bellwether for patient engagement.

Clinical Quality Measures

Although this team was not charged with commenting on clinical quality measures, we felt that patient engagement may easily be incorporated as each quality measure is considered. A patient specific report card that answers the question, "How does my care compare" helps meet the overall goal of making information meaningful to patients. We encourage the development of a patient-facing structure that can accommodate this critical information and be used globally with CQM.

View, download and transmit, CC:ME

View, download and transmit, and the concept of CC:ME are strong tenants of patient engagement. CC:ME is consistent throughout this document. It is an on-demand application that allows for cc me or my designee, similar to the InfoButton standard. Using DIRECT, CC:ME could be used for any communication across the care team. Access to information also encourages a dialogue between the patient and the provider, which is critical to patient engagement. The patient engagement power team strongly suggests incorporating patient-generated data into Meaningful Use 2. This can be accommodated first using structured questionnaires that incorporate this feedback back in to the record. When the patient is the source of information accelerated data standards need to be developed in order to accommodate the dialogue between the patient and the provider. Furthermore, this anticipates the addition of patient initiated and generated data to the standards of Meaningful Use 3.

Metadata Retention

As data is exchanged to patient facing systems (and between providers) attachment of and retention of key metadata is important. Those metadata elements need to be specified and where they do not exist need to be fostered as key patient safety and coordination of care issues.

The SCC NPRM puts forth the concept of "clinical information reconciliation" with respect to medication list, medication allergy list, and problem list. The importance of these lists does not need to be restated. And we should endorse the importance of reconciliation being a part of certification, particularly with respect to medication lists. Reconciliation is a process and particularly with respect to medication lists involves the patient and caregivers. The function defined in the EHR system is to compare two or more lists and requires certain minimum requirements of the source data, such as last date of modification.

The output of these reconciliation processes is a list or document that is a snapshot in time of a set of data for a patient. The list however, has no characteristics that distinguish it from any other list. A medication list that is the output of such a process can have a text label as such, but this is lost in electronic exchange. A set of discrete data elements needs to be defined as a standard that represents an indication that THIS is a reconciled medication list, a timestamp for when it was reconciled, and the identity of the clinician responsible for the reconciliation. Without these interoperable data elements, the only date and person associated with an exchanged medication list is the date of the document that contains it and the creator of that document. Consider a system that receives more than one medication list. How does it distinguish which is reconciled and which is the more current document? This is particularly true for patient facing systems. This work can further inform other reconciliation efforts needed with patient generated documents, like advanced directives, medication adherence and self-reported health status

Care Team Roster

The inclusion of a proposed requirement to list care team members in the NPRM is very important. However, the minimum dataset that is specified does not seem adequate to facilitate the greatest possible improvement in patient engagement and coordination of care.

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Traditionally the concept of a care team was the individuals in an inpatient facility or ambulatory practice involved in an individual's care. That list of individuals could be assembled from the EHR system of that entity to the extent that they had access to that individual's record. However, the concept of care team in MU and in PCMH efforts is a patient centered care team that extends beyond an institution or single EHR system and includes the patient and caregivers, as well as non-physician providers in the community.

The minimum dataset for this patient centered care team roster that is part of patient demographics, or should be, needs to include a unique identifier for the team member, the role on the care team, and contact information for the team member, including the potential data element that is an electronic endpoint address for the team member. That unique identifier might be the NPI and would thereby enable access to information about that individual care team member's qualifications and licensure from the publicly available NPI database. There is also the potential to leverage the current efforts to develop federated provider directories and services associated with those that facilitate privacy and security in exchange.

The concepts of individual identity, contact information and patients and family members as participants is a part of existing standards. But the required minimum dataset for a care team roster needs to be defined in the final rule.

Thank you for your consideration.

DRAFT: INCOMPLETE WORK NOT REVIEWED BY TEAM

Overarching Themes				
Nothing About Me Without Me	I am a Contributing Care Team Member	Many EHR actions have a corresponding or correlating patient facing system reaction	Patient Facing Systems are not limited by legacy transactional systems	How Does My Care Compare to CQM's?
Specific Rationale				
Understandable to me, plain language	<p>I am a credible source of information and generate meaningful and material data for my care</p> <ul style="list-style-type: none"> • Demographics • Vital signs • Family history • Medication adherence • Care adherence • Diet/exercise • Observations of Daily Living • Smoking Status • Patient Intolerance • Health History • Surgical History • Allergy • Advanced Directives • Patient response • Adherence • Pre-visit preparation • Preferences • Decisions 	Structured data will empower patients through interoperable patient facing systems	<p>Innovation can be encouraged beyond transactional systems with optional advanced standards.</p> <ul style="list-style-type: none"> • E.g. Patient Facing API • Social media • Portable devices 	Patient specific report cards for all clinical quality measures should be included within CQM standards
Understandable to me, my language	<p>Patient generated data is relevant to care</p> <ul style="list-style-type: none"> • Real-time • Historically • Iteratively • Prospectively 	Current workflow can be adapted to support patient engagement	Transactional approaches should be the minimum standard	Patient quality alerts like device recalls and changes should be required.

Overarching Themes				
Nothing About Me Without Me	I am a Contributing Care Team Member	Many EHR actions have a corresponding or correlating patient facing system reaction	Patient Facing Systems are not limited by legacy transactional systems	How Does My Care Compare to CQM's?
Specific Rationale				
My preferred communication method is used to contact me	My care goals may be: <ul style="list-style-type: none"> • Episodic • Chronic • Quality of Life 	Standards should be expanded for patient facing systems and harmonized	Data should be VDT in a computable, transferable, moveable way able to be trended, and at the data element level and human readable level at the patient's preference	I know what I am enrolled or what opportunities there are for me in research
CC: ME or my designee(s)	I can contribute to CQM success <ul style="list-style-type: none"> • Counseling • Education • Adherence 	Create once use often in both EHR and patient facing systems	Patient generated data should be able to be broadcast to all care participants based upon patient preference <ul style="list-style-type: none"> • create once use often 	Use of system to proactively identify that I am getting the services that I should, when I should, compared to industry standards and/or people like me (new)
Privacy and security for what I download is within my authority. Download patient directed/ patient protected	EHR should assume multiple providers in the care team including patient and their designee(s)	View and Transmits should be patient directed/provider protected.	Data standards should be accelerated where patient generated data is anticipated	
I can download or transmit none, some or all of my records within my authority:	I am a necessary and important safety checkpoint	Many orders by clinicians are directed to patients and/or are components of care plans	VDT should include links to patient specific education materials: IB standard.	
I expect my information within the EHR is secure and private: Patient directed: provider protected.	I am a health data exchange of one	Patient generate meaningful adherence information, (close the loop)	Single standard vocabularies should be harmonized in patient, EHR and CQM systems.	
Patient preferences inform care, safety and decisions	I am an important part of shared decision-making where preference sensitive care exists	Clinical information reconciliation needs to accommodate patient as participant	Design in "green field" areas like transitions of care should include patient and designee(s)	
My access should be immediate (as available to EP) or at my direction/preference, but no greater than 2 business days.	Secure messaging informs care and should be part of the care record.	Metadata needs to be preserved when communicating with patient facing systems		

CORE— 1**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per State, local and professional guidelines to create the first record of the order.

MEANINGFUL USE Proposed Stage 2 Measure

More than 60% of medication, laboratory, and radiology orders created by the EP or authorized providers of the EH's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.

NUMERATOR

The number of orders in the denominator recorded using CPOE.

DENOMINATOR

Number of medication, radiology, and laboratory orders created by the EP or authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(1)

Computerized provider order entry. Enable a user to electronically record, change, and access the following order types, at a minimum:

- (i) Medications;
- (ii) Laboratory; and
- (iii) Radiology/imaging.

STANDARDS

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

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WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:

Overarching Principle(s):

Nothing About Me Without Me: I am a Contributing Care Team Member:

Many EHR actions have a corresponding or correlating patient facing system reaction:

Rationale for Change:

CC: ME or my designee(s): current workflow can be adapted to support patient engagement: standard should be expanded for patient facing systems and harmonized: many orders by clinicians are directed to patients and or are components of care plans:

CORE— 2**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Generate and transmit permissible prescriptions electronically (eRx).

MEANINGFUL USE Proposed Stage 2 Measure

More than 65% of all permissible prescriptions written by the EP are compared to at least one drug formulary and transmitted electronically using Certified EHR Technology.

NUMERATOR

The number of prescriptions in the denominator generated, compared to a drug formulary and transmitted electronically.

DENOMINATOR

Number of prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(b)(3) / §170.314(a)(10)

Electronic prescribing. Enable a user to electronically create prescriptions and prescription-related information for electronic transmission in accordance with:

- (i) The standard specified in § 170.205(b)(2); and
- (ii) At a minimum, the version of the standard specified in § 170.207(h).

Drug-formulary checks. Enable a user to electronically check if drugs are in a formulary or preferred drug list.

STANDARDS

§ 170.205(b)((2)

(NCPDP SCRIPT version 10.6) and § 170.207(h) (RxNorm February 6, 2012 Release)

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part

of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU3: patient generated adherence questionnaires integrated back into the record RxNorm

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

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Liz Johnson

Workgroup Comments:

Overarching Principle(s):

nothing about me without me: many EHR actions have a corresponding or correlating patient facing system reaction

Rationale for Change:

cc me(including formulary): patient preferences inform care, safety and decisions (pharmacy preference):structured data will empower patients through interoperable patient facing systems; current is workflow can be adapted to support patient engagement: patients generate meaningful adherence information (close the loop): I am a health data exchange of one (need to inform others): EHR should assume multiple providers in the care team including patient and their designee(s)

CORE— 3**EP and EH except as noted****MEANINGFUL USE Proposed Stage 2 Objective****EP Only**

Record the following demographics:

- Preferred language
- Gender
- Race
- Ethnicity
- Date of birth

EH Only

Record the following demographics:

- Preferred language
- Gender
- Race
- Ethnicity
- Date of birth
- Date and preliminary cause of death in the event of mortality in the EH or CAH.

MEANINGFUL USE Proposed Stage 2 Measure

More than 80% of all unique patients seen by the EP or admitted to the EH's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data.

NUMERATOR

The number of patients in the denominator who have all the elements of demographics (or a specific notation if the patient declined to provide one or more elements or if recording an element is contrary to State law) recorded as structured data.

DENOMINATOR

Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(3)

Demographics.

- (i) Enable a user to electronically record, change, and access patient demographic data including preferred language, gender, race, ethnicity, and date of birth.
- (A) Enable race and ethnicity to be recorded in accordance with the standard specified in § 170.207(f) and whether a patient declines to specify race and/or ethnicity.
- (B) Enable preferred language to be recorded in accordance with the standard specified in § 170.207(j) and whether a patient declines to specify a preferred language.

- (ii) Inpatient setting only. Enable a user to electronically record, change, and access preliminary cause of death in the event of a mortality in accordance with the standard specified in § 170.207(k).

WG LEAD(s)

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STANDARDS

§ 170.207(f)(OMB standards); § 170.207(j) (ISO 639-1:2002); and § 170.207(k) (ICD-10-CM)

Specific recommendations for the standards:

MU2: Patient generated questionnaire answers are incorporated into standard.

MU2: CDC or more granular definitions are encouraged

MU3: standard increased to include family history, medication adherence, care adherence, diet and exercise, observations of daily living, smoking status, patient intolerances, health history, surgical history, allergies, advanced directives.

Workgroup Comments:

Overarching Principle(s):

I am a Contributing Care Team Member: nothing about me without me

Rationale for Change:

I am a credible source of information and generate meaningful and material data for my care: patient generated data is relevant to care; real-time, historically, iteratively, and prospectively. Structured data will empower patients through interoperable patient facing systems: Current workflow can be adapted to support patient engagement: Standards should be expanded for patient facing systems and harmonized. CC: me or my designee(s). Create once use often in both EHR and patient facing systems. Metadata needs to be preserved when communicating with patient facing systems. I am a health data exchange of one. EHR should assume multiple providers in the care team including patient and their designee(s). Data standards should be accelerated where patient generated data is anticipated.

CORE— 4**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Record and chart changes in vital signs:

- Height/length
- Weight
- Blood pressure (age 3 and over)
- Calculate and display BMI
- Plot and display growth charts for patients 0–20 years, including BMI.

MEANINGFUL USE Proposed Stage 2 Measure

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 blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data

NUMERATOR

Number of patients in the denominator who have at least one entry of their height/length and weight (all ages) and blood pressure (ages 3 and over) recorded as structured data.

DENOMINATOR

Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(4)

Vital signs, body mass index, and growth charts.

- (i) Vital signs. Enable a user to electronically record and change, and access recordings of a patient's vital signs including, at a minimum, height/length, weight, and blood pressure.
- (ii) Calculate body mass index. Automatically calculate and electronically display body mass index based on a patient's height and weight.
- (iii) Optional. Plot and display growth charts. Plot and electronically display, upon request, growth charts for patients.

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WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
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Liz Johnson

STANDARDS

Specific recommendations for the standards:

MU2: Patient generated questionnaire answers are incorporated into standard.

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU2: Add pain scale

MU3: standard increased to include family history, medication adherence, care adherence, diet and exercise, observations of daily living, patient intolerances, health history, surgical history, allergies, advanced directives. Support patient device data for patient self-management and ongoing management.

Workgroup Comments:**Overarching Principle(s):**

I am a Contributing Care Team Member: nothing about me without me

Rationale for Change:

I am a credible source of information and generate meaningful and material data for my care: patient generated data is relevant to care; real-time, historically, iteratively, and prospectively. Structured data will empower patients through interoperable patient facing systems: Current workflow can be adapted to support patient engagement: Standards should be expanded for patient facing systems and harmonized. CC: me or my designee(s). Create once use often in both EHR and patient facing systems. Metadata needs to be preserved when communicating with patient facing systems. I am a health data exchange of one. EHR should assume multiple providers in the care team including patient and their designee(s). Data standards should be accelerated where patient generated data is anticipated.

CORE— 5**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Record smoking status for patients 13 years old or older.

MEANINGFUL USE Proposed Stage 2 Measure

More than 80% of all unique patients 13 years old or older seen by the EP or admitted to the EH's or CAH's inpatient or emergency department (POS 21 or 23) have smoking status recorded as structured data

NUMERATOR

The number of patients in the denominator with smoking status recorded as structured data.

DENOMINATOR

Number of unique patients age 13 or older seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(11)

Smoking status. Enable a user to electronically record, change, and access the smoking status of a patient in accordance with the standard specified at § 170.207(l).

WG LEAD(s)

Leslie Kelly Hall-chair
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Liz Johnson

STANDARDS

§ 170.207(l) (smoking status types)

Specific recommendations for the standards:

MU2: Patient generated questionnaire answers are incorporated into standard.

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records

Workgroup Comments:**Overarching Principle(s):**

I am a Contributing Care Team Member: nothing about me without me

Rationale for Change:

I am a credible source of information and generate meaningful and material data for my care: patient generated data is relevant to care; real-time, historically, iteratively, and prospectively. Structured data will empower patients through interoperable patient facing systems: Current workflow can be adapted to support patient engagement: Standards should be expanded for patient facing systems and harmonized. CC: me or my designee(s). Create once use often in both EHR and patient facing systems. Metadata needs to be preserved when communicating with patient facing systems. I am a health data exchange of one. EHR should assume multiple providers in the care team including patient and their designee(s). Data standards should be accelerated where patient generated data is anticipated.

CORE— 6**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Use clinical decision support to improve performance on high-priority health conditions.

MEANINGFUL USE Proposed Stage 2 Measure

1. Implement 5 clinical decision support interventions related to 5 or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period.
2. The EP, EH or CAH has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**Clinical decision support.

- (i) Evidence-based decision support interventions. Enable a user to select (or activate) one or more electronic clinical decision support interventions (in addition to drug-drug and drug-allergy contraindication checking) based on the data elements included in each one or any combination of the following:
 - (A) Problem list;
 - (B) Medication list;
 - (C) Medication allergy list;
 - (D) Demographics;
 - (E) Laboratory tests and values/results; and
 - (F) Vital signs.
- (ii) Linked referential clinical decision support.
 - (A) Enable a user to retrieve diagnostic or therapeutic reference information in accordance with the standard specified at § 170.204(b)(1).
 - (B) Enable a user to access the reference information specified in paragraph (ii)(A) relevant to patient context based on the data elements included in each one or any combination of the following:
 - (1) Problem list;
 - (2) Medication list;
 - (3) Medication allergy list;

- (4) Demographics;
- (5) Laboratory tests and values/results; and
- (6) Vital signs.

(iii) Configure clinical decision support.

- (A) Enable interventions and reference resources specified in paragraphs (a)(8)(i) and (ii) to be configured by an identified set of users (e.g., system administrator) based on each one of the following:
 - (1) A user's role;
 - (2) Clinical setting; and
 - (3) Identified points in the clinical workflow.
 - (B) Enable interventions to be triggered, based on the data elements specified in paragraph (a)(8)(i), when a summary care record is incorporated pursuant to § 170.314(b)(1).
- (iv) *Automatically and electronically interact. Interventions selected and configured in accordance with paragraphs (a)(8)(i)-(iii) must automatically and electronically occur when a user is interacting with EHR technology.*
 - (v) *Source attributes. Enable a user to review the attributes for each intervention or reference source for all clinical decision support resources including:*
 - (A) Bibliographic citation (clinical research/guideline) including publication;
 - (B) Developer of the intervention (translation from clinical research/guideline);
 - (C) Funding source of the intervention development technical implementation; and
 - (D) Release and, if applicable, revision date of the intervention.

Drug-drug, drug-allergy interaction checks

- (i) Interventions. Before a medication order is placed during computerized provider order entry (CPOE), interventions must automatically and electronically indicate to a user at the point of care of drug-drug and drug-allergy contraindications based on medication list and medication allergy list.
- (ii) Adjustments.
 - (A) Enable the severity level of interventions provided for drug-drug interaction checks to be adjusted.
 - (B) Limit the ability to adjust severity levels to an identified set of users or available as a system administrative function.

WG LEAD(s)

Leslie Kelly Hall-chair

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STANDARDS

§ 170.204(b)(1) (HL7 Context-Aware Knowledge Retrieval (“Infobutton”) Standard, International Normative Edition 2010

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU3: patient preferences should be included in clinical decision support alerts and actions. Preference sensitive care, conditions, treatments, tests should incorporate patient preferences of care and incorporate shared decision-making. Patient attribution accommodated.

MU2: Clinical information reconciliation needs to accommodate a specific data element that indicates that the information (lists or individual) has been reconciled with time stamp and clinician responsible. Adherence can also be included with the reconciliation and provided by the patient, (or designee) and also time date stamped with author. Metadata should carry with all data transactions.

Workgroup Comments:

Overarching Principle(s):

nothing about me without me: I'm a contributing care team member:

many EHR actions have a corresponding or correlating patient facing system reaction

Rationale for Change:

CC:me, EHR should assume multiple providers in the care team including patient and their designee(s): many orders by clinicians are directed to patients and or are components of care plans: I am a necessary and important safety checkpoint: Structured data will empower patients through interoperable patient facing systems. Current workflow can be adapted to support patient engagement Structured data will empower patients through interoperable patient facing systems. Patient generated data is relevant to care, Real-time, Historically, Iteratively, Prospectively. Standards should be expanded for patient facing systems and harmonized. My care goals may be: Episodic, Chronic, Quality of Life. I am an important part of shared decision-making where preference sensitive care exists: Standards should be expanded for patient facing systems and harmonized

CORE—7**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Incorporate clinical lab-test results into Certified EHR Technology as structured data.

MEANINGFUL USE Proposed Stage 2 Measure

More than 55% of all clinical lab tests results ordered by the EP or by authorized providers of the EH 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.

NUMERATOR

Number of lab test results whose results are expressed in a positive or negative affirmation or as a number which are incorporated in Certified EHR Technology as structured data.

DENOMINATOR

Number of lab tests ordered during the EHR reporting period by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) whose results are expressed in a positive or negative affirmation or as a number.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(b)(5)

Incorporate laboratory tests and values/results.

- (i) Receive results.
 - (A) Ambulatory setting only.
 - (1) Electronically receive clinical laboratory tests and values/results formatted in accordance with the standard (and implementation specifications) specified at § 170.205(k) and, at a minimum, the version of the standard specified in § 170.207(g).
 - (2) Electronically display the tests and values/results received in human readable format.
 - (B) Inpatient setting only. Electronically receive clinical laboratory tests and values/results in a structured format and electronically display such tests and values/results in human readable format.

- (ii) Display test report information. Electronically display all the information for a test report specified at 42 CFR 493.1291(c)(1) through (7).
- (iii) Incorporate tests and values/results. Electronically incorporate a laboratory test and value/result with a laboratory order or patient record.

WG LEAD(s)

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STANDARDS

§ 170.205(k) (HL7 2.5.1 and HL7 Version 2.5.1 Implementation Guide: Standards and Interoperability Framework Lab Results Interface, Release 1 (US Realm)); and § 170.207(g) (LOINC version 2.38)

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU2: Incorporate InfoButton standard for all patient facing systems.

Workgroup Comments;**Overarching Principle(s):**

nothing about me without me: I'm a contributing care team member: many EHR actions have a corresponding or correlating patient facing system reaction

Rationale for Change:

CC:me, my access should be immediate (as available to EP) or at my direction/preference or no later than two business days. I am a health data exchange of one. Current workflow can be adapted to support patient engagement. Standards should be expanded for patient facing systems and harmonized. Many orders by clinicians are directed to patients and or/are components of care plans. Innovation can be encouraged beyond transactional systems with optional advanced standards. Metadata needs to be preserved when communicating with patient facing systems. Current workflow can be adapted to support patient engagement. My preferred communication method is used to contact me.

CORE— 8**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

MEANINGFUL USE Proposed Stage 2 Measure

Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(a)(14)

Patient lists. Enable a user to electronically select, sort, access, and create lists of patients according to, at a minimum, the data elements included in:

- (i) Problem list;
- (ii) Medication list;
- (iii) Demographics; and
- (iv) Laboratory tests and values/results.

STANDARDS

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU3: Query framework to provide on demand patient lists using any previously identified data element standard.

MU3: Patient preference should be considered in data elements.

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:

Overarching Principle(s):

How does my care compare to the CQMs?

Rationale for Change:

I can contribute to CQM success where counseling, education, and adherence are incorporated. My care goals may be episodic, chronic, or quality of life. Patient specific report cards for all clinical quality measures should be included within the CQM standards. I know what I am enrolled or what opportunities there are for me in research. Use of system to proactively identify that I am getting the services that I should, when I should, compared to industry standards and/or people like me. My preferred communication method is used to contact me.

CORE—9**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care.

MEANINGFUL USE Proposed Stage 2 Measure

More than 10% of all unique patients who have had an office visit with the EP within the 24 months prior to the beginning of the EHR reporting period were sent a reminder, per patient preference.

NUMERATOR

Number of patients in the denominator who were sent a reminder per patient preference during the EHR reporting period.

DENOMINATOR

Number of unique patients who have had an office visit with the EP in the 24 months prior to the beginning of the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(15)

Ambulatory setting only. Patient reminders. Enable a user to electronically create a patient reminder list for preventive or follow-up care according to patient preferences based on, at a minimum, the data elements included in:

- (i) Problem list;
- (ii) Medication list;
- (iii) Medication allergy list;
- (iv) Demographics; and
- (v) Laboratory tests and values/results.

STANDARDS

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the info button standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU2: Patient facing systems should include Info button standard to attach patient specific education materials.

MU2: Patient generated questionnaire answers are incorporated into standard

MU3: Query framework to provide on demand patient lists using any previously identified data element standard.

MU3: Patient preference should be considered in data elements

MU3: Evidence based medicine care plans with rules engine standard developed to provide clinically significant reminders.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

I am a Contributing Care Team Member, Nothing About Me Without Me

Rationale for Change:

can contribute to CQM success where counseling, education, and adherence are incorporated. My care goals may be episodic, chronic, or quality of life. I know what I am enrolled in or what opportunities there are for me in research. Use of system to proactively identify that I am getting the services that I should, when I should, compared to industry standards and/or people like me. My preferred communication method is used to contact me. I am a credible source of information and generate meaningful and material data for my care.

CORE— 10**EH only****MEANINGFUL USE Proposed Stage 2 Objective**

Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).

MEANINGFUL USE Proposed Stage 2 Measure

More than 10% of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are tracked using eMAR.

NUMERATOR

The number of orders in the denominator tracked using eMAR.

DENOMINATOR

Number of medication orders created by authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(17)

Inpatient setting only. Electronic medication administration record.

- (i) In combination with an assistive technology that provides automated information on the “rights” specified in paragraphs (i)(A) through (i)(D), enable a user to electronically verify the following before administering medication(s):
 - (A) Right patient. The patient to whom the medication is to be administered matches the medication to be administered.
 - (B) Right medication. The medication to be administered matches the medication ordered for the patient.
 - (C) Right dose. The dose of the medication to be administered matches the dose of the medication ordered for the patient.
 - (D) Right route. The route of medication delivery matches the route specified in the medication order.
- (ii) Right time. Electronically record the time and date in accordance with the standard specified at § 170.210(g), and user identification when a medication is administered.

STANDARDS

§ 170.210(g) (synchronized clocks)

Specific recommendations for the standards:

Right patient. The patient to whom the medication is to be administered matches the medication to be administered and the patient (where able) acknowledges.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

Overarching Principle(s):

I am a Contributing Care Team Member

Rationale for Change:

I'm and necessary and important safety checkpoint.

CORE— 11**EP and EH as noted****MEANINGFUL USE Proposed Stage 2 Objective**

EP only Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.

EH only

Provide patients the ability to view online, download, and transmit information about a hospital admission.=

MEANINGFUL USE Proposed Stage 2 Measure

EP only EPs must satisfy both measures in order to meet the objective:

1. More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information.
2. More than 10 percent of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download or transmit to a third party their health information.

EH only

EHs and CAHs must satisfy both measures in order to meet the objective:

1. More than 50% of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge.
2. More than 10% of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH view, download or transmit to a third party their information during the reporting period.

NUMERATOR**EP only**

1. The number of patients in the denominator who have timely (within 4 business days after the information is available to the EP) online access to their health information online.
2. The number of unique patients (or their authorized representatives) in the denominator who have viewed online or downloaded or transmitted to a third party the patient's health information.

EH only

1. The number of patients in the denominator whose information is available online within 36 hours of discharge.
2. The number of patients in the denominator who view, download or transmit to a third party the information provided by the eligible hospital or CAH online during the EHR reporting period.

DENOMINATOR**EP only**

1. Number of unique patients seen by the EP during the EHR reporting period.
2. Number of unique patients seen by the EP during the EHR reporting period.

EH only

1. Number of unique patients seen by the EP during the EHR reporting period.
2. Number of unique patients seen by the EP during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA—EP and EH

§170.314(e)(1)

View, download, and transmit to 3rd party.

- (i) Enable a user to provide patients (and their authorized representatives) with online access to do all of the following:
 - (A) View. Electronically view in accordance with the standard adopted at § 170.204(a), at a minimum, the following data elements:
 - (1) Patient name; gender; date of birth; race; ethnicity; preferred language; smoking status; problem list; medication list; medication allergy list; procedures; vital signs; laboratory tests and values/results; provider's name and contact information; names and contact information of any additional care team members beyond the referring or transitioning provider and the receiving provider; and care plan, including goals and instructions.
 - (2) Inpatient setting only. Admission and discharge dates and locations; reason(s) for hospitalization; names of providers of care during hospitalization; laboratory tests and values/results (available at time of discharge); and discharge instructions for patient.
 - (B) Download. Electronically download:
 - (1) A file in human readable format that includes, at a minimum:
 - (i) Ambulatory setting only. All of the data elements specified in paragraph (e)(1)(i)(A)(1).
 - (ii) Inpatient setting only. All of the data elements specified in paragraphs (e)(1)(i)(A)(1) and (e)(1)(i)(A)(2).
 - (2) A summary care record formatted according to the standards adopted at § 170.205(a)(3) and that includes, at a minimum, the following data elements expressed, where applicable, according to the specified standard(s):
 - (i) Patient name; gender; date of birth; medication allergies; vital signs; the provider's name and contact information; names and contact information of any additional care team members beyond the referring or transitioning provider and the receiving provider; care plan, including goals and instructions;
 - (ii) Race and ethnicity. The standard specified in § 170.207(f);

- (iii) Preferred language. The standard specified in § 170.207(j);
 - (iv) Smoking status. The standard specified in § 170.207(l);
 - (v) Problems. At a minimum, the version of the standard specified in § 170.207(a)(3);
 - (vi) Encounter diagnoses. The standard specified in § 170.207(m);
 - (vii) Procedures. The standard specified in § 170.207(b)(2) or § 170.207(b)(3);
 - (i) (viii)Laboratory test(s). At a minimum, the version of the standard specified in § 170.207(g);
 - (viii) Laboratory value(s)/result(s). The value(s)/results of the laboratory test(s) performed;
 - (ix) Medications. At a minimum, the version of the standard specified in § 170.207(h); and
 - (x) Inpatient setting only. The data elements specified in paragraph (e)(1)(i)(A)(2).
- (3) Images formatted according to the standard adopted at § 170.205(j).
- (C) Transmit to third party. Electronically transmit the summary care record created in paragraph (e)(1)(i)(B)(2) or images available to download in paragraph (e)(1)(i)(B)(3) in accordance with:
- (1) The standard specified in § 170.202(a)(1); and
 - (2) The standard specified in § 170.202(a)(2).
- (ii) Patient accessible log.
- (A) When electronic health information is viewed, downloaded, or transmitted to a third-party using the capabilities included in paragraphs (e)(1)(i)(A)-(C), the following information must be recorded and made accessible to the patient:
- (1) The electronic health information affected by the action(s);
 - (2) The date and time each action occurs in accordance with the standard specified at § 170.210(g);
 - (3) The action(s) that occurred; and
 - (4) User identification.
- (B) EHR technology presented for certification may demonstrate compliance with paragraph (e)(1)(ii)(A) if it is also certified to the certification criterion adopted at § 170.314(d)(2) and the information required to be recorded in paragraph (e)(1)(ii)(A) is accessible by the patient.

STANDARDS—EP and EH

§ 170.204(a) (Web Content Accessibility Guidelines (WCAG) 2.0, Level AA Conformance); § 170.205(a)(3) (Consolidated CDA); § 170.205(j) (DICOM PS 3—2011); § 170.207(f) (OMB standards for the classification of federal data on race and ethnicity); § 170.207(j) (ISO 639-1:2002 (preferred language)); § 170.207(l) (smoking status types); § 170.207(a)(3) (SNOMED-CT® International Release January 2012); § 170.207(m) (ICD-10-CM); § 170.207(b)(2) (HCPCS and CPT-4) or § 170.207(b)(3) (ICD-10-PCS); § 170.207(g) (LOINC version 2.38); § 170.207(h) (RxNorm February 6, 2012 Release); § 170.202(a)(1) (Applicability Statement for Secure Health Transport) and § 170.202(a)(2) (XDR and XDM for Direct Messaging); and § 170.210(g) (synchronized clocks)

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU2: Incorporate InfoButton standard for all patient facing systems.

MU3: Top 5 languages in top 50 conditions (EH) in patient specific education materials.

WORK PRODUCT: This document is a work product for the Health IT Standards Committee and its Workgroups to support ongoing discussions and does not represent HHS policy or opinion.

MU3: VDT standard should include patient preference options similar to the banking industry e.g. Excel, DIREC direct, my patient facing system, PDF, social networking.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

Overarching Principle(s):

nothing about me without me: I am contributing care team member many EHR actions have a corresponding or call relating patient facing system reaction: patient facing systems are not limited by legacy transactional systems:

Rationale for Change:

My access should be immediate or at my direction/preference or no later than 2 days from EP receipt. Understandable to me, my language understandable to me, plain language: I can download or transmit none, some or all of my records within my authority: my preferred communication method is used to contact me: cc me: I am health data exchange of one. View and transmit should be patient directed and provider protected. Innovation can be encouraged beyond transactional systems with optional advanced standards. Transactional approaches should be a minimum data standard. Data should be VDT in computable transferable, movable way able to be trended, at the data element level and human readable level at the patient's preference. Data standards should be accelerated or patient participation or patient generated data is anticipated. VDT should include links to patient specific education materials: IB standard. Single standard vocabularies should be harmonized in patient facing, EHR, and CQM systems. Design in "Greenfield" areas like transitions of care should include patients and their designees.

CORE— 12**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Provide clinical summaries for patients for each office visit.

MEANINGFUL USE Proposed Stage 2 Measure

Clinical summaries provided to patients within 24 hours for more than 50 % of office visits.

NUMERATOR

Number of office visits in the denominator where the patient is provided a clinical summary of their visit within 24 hours.

DENOMINATOR

Number of office visits conducted by the EP during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(e)(2)

Ambulatory setting only. Clinical summaries. Enable a user to provide clinical summaries to patients for each office visit that include, at a minimum, the following data elements: provider's name and office contact information; date and location of visit; reason for visit; patient's name; gender; race; ethnicity; date of birth; preferred language; smoking status; vital signs and any updates; problem list and any updates; medication list and any updates; medication allergy list and any updates; immunizations and/or medications administered during the visit; procedures performed during the visit; laboratory tests and values/results, including any tests and values/results pending; clinical instructions; care plan, including goals and instructions; recommended patient decision aids (if applicable to the visit); future scheduled tests; future appointments; and referrals to other providers. If the clinical summary is provided electronically, it must be:

- (i) Provided in human readable format; and
- (ii) Provided in a summary care record formatted according to the standard adopted at § 170.205(a)(3) with the following data elements expressed, where applicable, according to the specified standard(s):
 - (A) Race and ethnicity. The standard specified in § 170.207(f);
 - (B) Preferred language. The standard specified in § 170.207(j);
 - (C) Smoking status. The standard specified in § 170.207(l);
 - (D) Problems. At a minimum, the version of the standard specified in § 170.207(a)(3);
 - (E) Encounter diagnoses. The standard specified in § 170.207(m);
 - (F) Procedures. The standard specified in § 170.207(b)(2) or § 170.207(b)(3);
 - (G) Laboratory test(s). At a minimum, the version of the standard specified in § 170.207(g);
 - (H) Laboratory value(s)/result(s). The value(s)/results of the laboratory test(s) performed; and
 - (i) Medications. At a minimum, the version of the standard specified in § 170.207(h).

STANDARDS

§ 170.205(a)(3) (Consolidated CDA); § 170.207(f) (OMB standards for the classification of federal data on race and ethnicity); § 170.207(j) (ISO 639-1:2002 (preferred language)); § 170.207(l) (smoking status types); § 170.207(a)(3) (SNOMED-CT[®] International Release January 2012); § 170.207(m) (ICD-10-CM); § 170.207(b)(2) (HCPCS and CPT-4) or § 170.207(b)(3) (ICD-10-PCS); § 170.207(g) (LOINC version 2.38); and § 170.207(h) (RxNorm February 6, 2012 Release)

Specific recommendations for the standards:

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU2: Incorporate InfoButton standard for all patient facing systems.

MU2: clinical information reconciliation needs to include patient as a participant.

MU3: VDT standard should include patient preference options similar to the banking industry e.g. Excel, DIREC direct, my patient facing system, PDF, social networking.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me: I am contributing care team member: many EHR actions have a corresponding or call relating patient facing system reaction: patient facing systems are not limited by legacy transactional systems:

Rationale for Change:

My access should be immediate or at my direction/preference or no later than 2 days from EP receipt. Clinical information reconciliation needs to accommodate patient as participant. Understandable to me, my language understandable to me, plain language: I can download or transmit none, some or all of my records within my authority: my preferred communication method is used to contact me: cc me: I am health data exchange of one. View and transmit should be patient directed and provider protected. Innovation can be encouraged beyond transactional systems with optional advanced standards. Transactional approaches should be a minimum data standard. Data should be VDT in computable transferable, movable way able to be trended, at the data element level and human readable level at the patient's preference. Data standards

should be accelerated or patient participation or patient generated data is anticipated. VDT should include links to patient specific education materials: IB standard. Single standard vocabularies should be harmonized in patient facing, EHR, and CQM systems. Design in “Greenfield” should include patients and their designees. Patient generated data is relevant to care. I can contribute to CQM success: effective self-management, counseling, education, and adherence.

CORE— 13**EP and EH except as noted****MEANINGFUL USE Proposed Stage 2 Objective**

Use Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.

MEANINGFUL USE Proposed Stage 2 Measure

EP only: Patient-specific education resources identified by Certified EHR Technology are provided to patients for more than 10% of all office visits by the EP.

EH only: More than 10% of all unique patients admitted to the EH's or CAH's inpatient or emergency departments (POS 21 or 23) are provided patient-specific education resources identified by Certified EHR Technology.

NUMERATOR

EPs only: Number of patients who had office visits during the EHR reporting period who were subsequently provided patient-specific education resources identified by Certified EHR Technology.

EHs only: More than 10% of all unique patients admitted to the EH's or CAH's inpatient or emergency departments (POS 21 or 23) are provided patient-specific education resources identified by Certified EHR Technology.

DENOMINATOR

EPs: Number of office visits by the EP during the EHR reporting period.

EHs: Number of unique patients admitted to the EH's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(16)

Patient-specific education resources. Enable a user to electronically identify and provide patient-specific education resources according to:

- (i) At a minimum, each one of the data elements included in the patient's: problem list; medication list; and laboratory tests and values/results; and
- (ii) The standard specified at § 170.204(b)(1).

WORK PRODUCT: This document is a work product for the Health IT Standards Committee and its Workgroups to support ongoing discussions and does not represent HHS policy or opinion.

STANDARDS

§ 170.204(b)(1) (HL7 Context-Aware Knowledge Retrieval (Infobutton) Standard, International Normative Edition 2010)

Specific recommendations for the standards:

MU2: Include Info button in patient facing systems accommodate response back to record of what was provided.

MU3: Preference sensitive care, conditions, treatments, tests should incorporate patient preferences of care and incorporate shared decision-making. Includes goals that the patient agrees with (SDM)

MU2: Incorporate top 5 languages for top 50 discharge instructions.(EH)

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

I am a contributing member of my care team. Nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction.

Rationale for Change:

Understandable to me, my language: understandable to me, plain language: my preferred communication method is used to contact me: cc me: I am health data exchange of one. View and transmit should be patient directed and provider protected. Patient generated data is relevant to care. I can contribute to CQM success: effective self-management, counseling, education, and adherence.

CORE— 14**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Use secure electronic messaging to communicate with patients on relevant health information.

MEANINGFUL USE Proposed Stage 2 Measure

A secure message was sent using the electronic messaging function of Certified EHR Technology by more than 10% of unique patients seen during the EHR reporting period.

NUMERATOR

The number of patients in the denominator who send a secure electronic message to the EP using the electronic messaging function of Certified EHR Technology during the EHR reporting period.

DENOMINATOR

Number of unique patients seen by the EP during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(e)(3)

Ambulatory setting only. Secure messaging. Enable a user to electronically send messages to, and receive messages from, a patient in a manner that ensures:

- (i) Both the patient and EHR technology are authenticated; and
- (ii) The message content is encrypted and integrity-protected in accordance with the standard for encryption and hashing algorithms specified at § 170.210(f).

STANDARDS

§ 170.210(f) Any encryption and hashing 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.

Specific recommendations for the standards:

MU2: Information Button standard available in the workflow for education materials

MU2: Demographics need to include patient preference in communication and correlating address

MU2: Incorporate InfoButton standard for all patient facing systems.

MU2: Care Team needs to be included in demographics with corresponding secure email address and role of participant

MU2: Secure messaging informs care and should be part of the care record.

MU2: CC: ME On demand. Building on the info button standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments**Overarching Principle(s):**

Nothing without Me about Me. Understandable to me, plain language, Patient Direct/Provider Protected

Rationale for Change:

Secure messaging informs care and should be part of the care record. My preferred communication method is used to contact me: cc me: I am health data exchange of one. View and transmit should be patient directed and provider protected. Patient generated data is relevant to care. I can contribute to CQM success: effective self-management, counseling, education, and adherence.

CORE—15**EP and EH except as noted****MEANINGFUL USE Proposed Stage 2 Objective**

EP Only: 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.

EH only: The EH 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.

MEANINGFUL USE Proposed Stage 2 Measure

The EP, EH or CAH performs medication reconciliation for more than 65% 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).

NUMERATOR

The number of transitions of care in the denominator where medication reconciliation was performed.

DENOMINATOR

Number of transitions of care during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) was the receiving party of the transition.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(b)(4)

Clinical information reconciliation. Enable a user to electronically reconcile the data elements that represent a patient's active medication, problem, and medication allergy list as follows. For each list type:

- (i) Electronically display the data elements from two or more sources in a manner that allows a user to view the data elements and their attributes, which must include, at a minimum, the source and last modification date.
- (ii) Enable a user to merge and remove individual data elements.
- (iii) Enable a user to review and validate the accuracy of a final set of data elements and, upon a user's confirmation, automatically update the list.

STANDARDS**Specific recommendations for the standards:**

WORK PRODUCT: This document is a work product for the Health IT Standards Committee and its Workgroups to support ongoing discussions and does not represent HHS policy or opinion.

MU2: Clinical information reconciliation needs to accommodate a specific data element that indicates that the information (lists or individual) has been reconciled with time stamp and clinician responsible.

Adherence can also be included with the reconciliation and provided by the patient, (or designee) and also time date stamped with author. Metadata should carry with all data transactions.

MU2: patient generated adherence questionnaires integrated back into the record

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

I am contributing care team member. Nothing about me without me.

Rationale for Change:

My preferred communication method is used to contact me: cc me: I am health data exchange of one.

Patient generated data is relevant to care. I can contribute to CQM success: effective self-management, counseling, education, and adherence. I am a credible source of information, care history, goals for care.

Information should be created once used often. I am an necessary and important safety checkpoint.

CORE— 16**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

The EP, EH, 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 care record for each transition of care or referral.

MEANINGFUL USE Proposed Stage 2 Measure

EPs, EHs, and CAHs must satisfy both measures in order to meet the objective:

- (i) The EP, EH, or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 65% of transitions of care and referrals.
- (ii) The EP, EH, or CAH that transitions or refers their patient to another setting of care or provider of care electronically transmits a summary of care record using certified EHR technology to a recipient with no organizational affiliation and using a different Certified EHR Technology vendor than the sender for more than 10% of transitions of care and referrals.

NUMERATOR

1. The number of transitions of care and referrals in the denominator where a summary of care record was the transferring or referring provider.
2. The number of transitions of care and referrals in the denominator where a summary of care record was electronically transmitted using Certified EHR Technology to a recipient with no organizational affiliation and using a different Certified EHR Technology vendor than the sender.

DENOMINATOR

1. Number of transitions of care and referrals during the EHR reporting period for which the EP or EH's or CAH's inpatient or emergency department (POS 21 or 23) was the transferring or referring provider.
2. Number of transitions of care and referrals during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) was the transferring or referring provider.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

170.314(b)(1) / §170.314(b)(2)

Transitions of care - incorporate summary care record. Upon receipt of a summary care record formatted according to the standard adopted at § 170.205(a)(3), electronically incorporate, at a minimum, the following data elements: Patient name; gender; race; ethnicity; preferred language; date of birth; smoking status; vital signs; medications; medication allergies; problems; procedures; laboratory tests and values/results; the referring or transitioning provider's name and contact information; hospital admission and discharge dates and locations; discharge instructions; reason(s) for hospitalization; care plan, including goals and instructions; names of providers of care during hospitalization; and names and contact information of any additional known care team members beyond the referring or transitioning provider and the receiving provider.

Transitions of care - create and transmit summary care record

- (i) Enable a user to electronically create a summary care record formatted according to the standard adopted at § 170.205(a)(3) and that includes, at a minimum, the following data elements expressed, where applicable, according to the specified standard(s):
 - (A) Patient name; gender; date of birth; medication allergies; vital signs; laboratory tests and values/results; the referring or transitioning provider's name and contact information; names and contact information of any additional care team members beyond the referring or transitioning provider and the receiving provider; care plan, including goals and instructions;
 - (B) Race and ethnicity. The standard specified in § 170.207(f);
 - (C) Preferred language. The standard specified in § 170.207(j);
 - (D) Smoking status. The standard specified in § 170.207(1);
 - (E) Problems. At a minimum, the version of the standard specified in § 170.207(a)(3);
 - (F) Encounter diagnoses. The standard specified in § 170.207(m);
 - (G) Procedures. The standard specified in § 170.207(b)(2) or § 170.207(b)(3);
 - (H) Laboratory test(s). At a minimum, the version of the standard specified in § 170.207(g);
 - (I) Laboratory value(s)/result(s). The value(s)/results of the laboratory test(s) performed;
 - (J) Medications. At a minimum, the version of the standard specified in § 170.207(h); and
- (ii) Inpatient setting only. Hospital admission and discharge dates and location; names of providers of care during hospitalization; discharge instructions; reason(s) for hospitalization; and indication of whether an advance directive exists.
- (iii) Transmit. Enable a user to electronically transmit the summary care record created in paragraph (i) in accordance with:
 - (A) The standards specified in § 170.202(a)(1) and (2).
 - Optional. The standard specified in § 170.202(a)(3).

STANDARDS

§ 170.205(a)(3) (Consolidated CDA); § 170.207(f) (OMB standards for the classification of federal data on race and ethnicity); § 170.207(j) (ISO 639-1:2002 (preferred language)); § 170.207(l) (smoking status types); § 170.207(a)(3) (SNOMED-CT[®] International Release January 2012); § 170.207(m) (ICD-10-CM); § 170.207(b)(2) (HCPCS and CPT-4) or § 170.207(b)(3) (ICD-10-PCS); § 170.207(g) (LOINC version 2.38); § 170.207(h) (RxNorm

February 6, 2012 Release); and § 170.202(a)(1) (Applicability Statement for Secure Health Transport); § 170.202(a)(2) (XDR and XDM for Direct Messaging); and § 170.202(a)(3) (SOAP-Based Secure Transport RTM version 1.0)

Specific recommendations for the standards:

MU2: Standard that defines two types of care teams: institutional care team and patient centered care team. Institutional care team may be hospital focused for acute event, and can accommodate the patient and designee(s) e.g. patient generated data. Patient centered care team assumes multiple institutions, providers, setting, designees and patient in design.

MU3: . Preference sensitive care, conditions, treatments, tests should incorporate patient preferences of care and incorporate shared decision-making. Includes goals that the patient agrees with (SDM)

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

Overarching Principle(s):

I am contributing member of my care team. Nothing about me without me.

Rationale for Change:

I am a credible source of information and generate meaningful and material data from my care. I am a health data exchange of one. I am an important part of shared decision-making where preference sensitive care exists

CORE— 17**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.

MEANINGFUL USE Proposed Stage 2 Measure

Successful ongoing submission of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire EHR reporting period.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(f)(1) / §170.314(f)(2)

Immunization information. Enable a user to electronically record, change, and access immunization information.

Transmission to immunization registries. Enable a user to electronically create immunization information for electronic transmission in accordance with:

1. The standard and applicable implementation specifications specified in § 170.205(e)(3); and
2. At a minimum, the version of the standard specified in § 170.207(i).

STANDARDS

§ 170.205(e)(3) (HL7 2.5.1 and Implementation Guide for Immunization Messaging Release 1.3); and § 170.207(i) (CVX code set: August 15, 2011 version)

Specific recommendations for the standards:

MU3: Patient notification

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

I am contributing care team member: nothing about me without me: many EHR actions have a corresponding correlating patient facing system reaction: how does my care compare to CQM's

Rationale for Change:

Clinical information reconciliation needs to include patient as a participant. Patient specific report cards for all clinical quality measures should be included within the CQM standards. Patient quality alerts like device recalls or public health issues should be required

CORE— 18**EH****MEANINGFUL USE Proposed Stage 2 Objective**

Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice.

MEANINGFUL USE Proposed Stage 2 Measure

Successful ongoing submission of electronic reportable laboratory results from Certified EHR Technology to public health agencies for the entire EHR reporting period as authorized.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

170.314(f)(5) / §170.314(f)(6)

Inpatient setting only. Reportable laboratory tests and values/results. Enable a user to electronically record, change, and access reportable clinical laboratory tests and values/results.

Inpatient setting only. Transmission of reportable laboratory tests and values/results. Enable a user to electronically create reportable laboratory tests and values/results for electronic transmission in accordance with:

- (i) The standard (and applicable implementation specifications) specified in § 170.205(g); and
- (ii) At a minimum, the versions of the standards specified in § 170.207(a)(3) and § 170.207(g).

STANDARDS

§ 170.205(g) (HL7 2.5.1 and HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm) with errata); § 170.207(a)(3) (SNOMED CT[®] International Release January 2012); and § 170.207(g) (LOINC version 2.38)

Specific recommendations for the standards:**MU3: Patient notification****WG LEAD(s)**

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

I am contributing care team member: nothing about me without me: many EHR actions have a corresponding correlating patient facing system reaction: how does my care compare to CQM's

Rationale for Change:

Clinical information reconciliation needs to include the date patient as a participant. Patient specific report cards for all clinical quality measures should be included within the CQM standards. Patient quality alerts like device recalls or public health issues should be required

CORE— 19**EH only****MEANINGFUL USE Proposed Stage 2 Objective**

Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

MEANINGFUL USE Proposed Stage 2 Measure

Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(f)(3) / §170.314(f)(4)

Public health surveillance. Enable a user to electronically record, change, and access syndrome-based public health surveillance information.

Transmission to public health agencies. Enable a user to electronically create syndrome-based public health surveillance information for electronic transmission in accordance with:

- (i) Ambulatory setting only.
 - (A) The standard specified in § 170.205(d)(2).
 - (B) (B) Optional. The standard (and applicable implementation specifications) specified in § 170.205(d)(3).
- (ii) Inpatient setting only. The standard (and applicable implementation specifications) specified in § 170.205(d)(3).

STANDARDS

§ 170.205(d)(2) (HL7 2.5.1) and § 170.205(d)(3) (HL7 2.5.1 and the PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data HL7 Version 2.5.1)

Specific recommendations for the standards:

MU3: Patient notification

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

I am contributing care team member: nothing about me without me: many EHR actions have a corresponding correlating patient facing system reaction: how does my care compare to CQM's

Rationale for Change:

Clinical information reconciliation needs to include the date patient as a participant. Patient specific report cards for all clinical quality measures should be included within the CQM standards. Patient quality alerts like device recalls or public health issues should be required

CORE— 20**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(1)

Authentication, access control, and authorization.

- (i) Verify against a unique identifier(s) (e.g., username or number) that a person seeking access to electronic health information is the one claimed; an
- (ii) Establish the type of access to electronic health information a user is permitted based on the unique identifier(s) provided in (d)(1)(i), and the actions the user is permitted to perform with the EHR technology.

STANDARDS

Specific recommendations for the standards:

MU2: Standards should include patient and designee(s) as recipients

MU2: Patient generated data questionnaires responses

MU3: Patient generated and initiated data.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

Overarching Principle(s):

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 21**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(2)

Auditable events and tamper-resistance.

- (i) Enabled by default. The capability specified in paragraph (d)(2)(ii) must be enabled by default (i.e., turned on) and must only be permitted to be disabled (and re-enabled) by a limited set of identified users.
- (ii) Record actions. Record actions related to electronic health information, audit log status and, as applicable, encryption of end-user devices in accordance with the standard specified in § 170.210(e).
- (iii) Audit log protection. Actions recorded in accordance with paragraph (d)(2)(ii) must not be capable of being changed, overwritten, or deleted.
- (iv) Detection. Detect the alteration of audit logs.

STANDARDS

§ 170.210(e) Record actions related to electronic health information, audit log status, and encryption of end-user devices.

(1) When EHR technology is used to record, create, change, access, or delete electronic health information, the following information must be recorded:

- (i) The electronic health information affected by the action(s);
- (ii) The date and time each action occurs in accordance with the standard specified at § 170.210(g);
- (iii) The actions(s) that occurred;
- (iv) Patient identification; and
- (v) User identification.

(2) When the audit log is enabled or disabled, the following must be recorded:

- (i) The date and time each action occurs in accordance with the standard specified at § 170.210(g); and
- (ii) User identification.

(3) As applicable, when encryption of electronic health information managed by EHR technology on end-user devices is enabled or disabled, the following must be recorded:

- (i) The date and time each actions occurs in accordance with the standard specified at § 170.210(g); and
- (ii) User identification.

Specific recommendations for the standards:

MU2: Standards should include patient and designee(s) as recipients

MU2: Patient generated data questionnaires responses

MU3: Patient generated and initiated data.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 22**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(3)

Audit report(s). Enable a user to create an audit report for a specific time period and to sort entries in the audit log according to each of the elements specified in the standard at § 170.210(e).

STANDARDS

§ 170.210(e) Record actions related to electronic health information, audit log status, and encryption of end-user devices.

4. When EHR technology is used to record, create, change, access, or delete electronic health information, the following information must be recorded:
 - (i) The electronic health information affected by the action(s);
 - (ii) The date and time each action occurs in accordance with the standard specified at § 170.210(g);
 - (iii) The actions(s) that occurred;
 - (iv) Patient identification; and
 - (v) User identification.

5. When the audit log is enabled or disabled, the following must be recorded:
 - (i) The date and time each action occurs in accordance with the standard specified at § 170.210(g); and
 - (ii) User identification.
6. As applicable, when encryption of electronic health information managed by EHR technology on end-user devices is enabled or disabled, the following must be recorded:
 - (i) The date and time each actions occurs in accordance with the standard specified at § 170.210(g); and
 - (ii) User identification.

Specific recommendations for the standards:

MU2: Standards should include patient and designee(s) as recipients

MU2: Patient generated data questionnaires responses

MU3: Patient generated and initiated data.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 23**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(4)

Amendments.

- (i) Enable a user to electronically amend a patient's health record to:
 - () Replace existing information in a way that preserves the original information; and
 - (A) Append patient supplied information, in free text or scanned, directly to a patient's health record or by embedding an electronic link to the location of the content of the amendment.
- (ii) Enable a user to electronically append a response to patient supplied information in a patient's health record.

STANDARDS**Specific recommendations for the standards:**

MU2: Standards should include patient and designee(s) as recipients

MU2: Patient generated data questionnaires responses

MU3: Patient generated and initiated data.

WG LEAD(s)

Leslie Kelly Hall-chair
 Jim Hansen
 Arien Malec
 Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 24**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(5)

Automatic log-off. Terminate an electronic session after a predetermined time of inactivity.

STANDARDS

Specific recommendations for the standards:

MU2: Patient facing systems should accommodate patient preferences

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 25**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(6)

Emergency access. Permit an identified set of users to access electronic health information during an emergency.

STANDARDS

Specific recommendations for the standards:

MU2: Standards should include patient and designee(s) as recipients

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 26**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(7)

Encryption of data at rest. Paragraph (d)(7)(i) or (d)(7)(ii) must be met to satisfy this certification criterion.

- (i) If EHR technology manages electronic health information on an end-user device and the electronic health information remains stored on the device after use of the EHR technology on that device has stopped, the electronic health information must be encrypted in accordance with the standard specified in § 170.210(a)(1). This capability must be enabled by default (i.e., turned on) and must only be permitted to be disabled (and re-enabled) by a limited set of identified users.
- (ii) Electronic health information managed by EHR technology never remains stored on end-user devices after use of the EHR technology on those devices has stopped.

STANDARDS

Specific recommendations for the standards:

MU2: Standards should include patient and designee(s) as recipients

MU2: Patient generated data questionnaires responses

MU3: Patient generated and initiated data.

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 27**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(8)

Integrity.

- (i) Create a message digest in accordance with the standard specified in 170.210(c).
- (ii) 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.

STANDARDS**Specific recommendations for the standards:**

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

MU2: Standards should include patient and designee(s) as recipients

MU2: Patient generated data questionnaires responses

MU3: Patient generated and initiated data.

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:**Overarching Principle(s):**

nothing about me without me. Many EHR actions have a corresponding or correlating patient facing system reaction. Patient facing systems are not limited by legacy transactional systems.

Rationale for Change:

Privacy and security for what I download is within my authority. I expect my information within the EHR is secure and private: Patient directed: provider protected.

CORE— 28**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

MEANINGFUL USE Proposed Stage 2 Measure

Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(d)(9)

Optional. Accounting of disclosures. Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in §170.210(d).

STANDARDS**Specific recommendations for the standards:**

MU2: CC: ME On demand. Building on the infobutton standard, an on demand cc: function to send any part of the record to patient or designee(s), including metadata and maintaining data fidelity and patient and provider specific context. (IB) (DIRECT) (CCD)

MU2: CC: ME preference. Standing patient preference for communication of records.

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

Overarching Principle(s):

nothing about me without me: I am contributing care team member: many EHR actions have a corresponding or correlating: patient facing system reaction:

Rationale for Change:

I am a credible source of information and generate meaningful material data for my care. My preferred communication method is used to contact me. CC:ME or my designee(s). Patient preferences informed care, safety and decisions.

CORE— 29**EH only****MEANINGFUL USE Proposed Stage 2 Objective**

Record whether a patient 65 years old or older has an advance directive

MEANINGFUL USE Proposed Stage 2 Measure

More than 50% of all unique patients 65 years old or older admitted to the EH's or CAH's inpatient department (POS 21) during the EHR reporting period have an indication of an advance directive status recorded as structured data.

NUMERATOR

The number of patients in the denominator who have an indication of an advance directive status entered using structured data.

DENOMINATOR

Number of unique patients age 65 or older admitted to an eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(18)

Inpatient setting only. Advance directives. Enable a user to electronically record whether a patient has an advance directive.

STANDARDS

Specific recommendations for the standards:

MU2: Standard modified to accommodate scanned copies with reconciliation and version control.

MU3: Patient generated legal document management standard for all patient level directives. I

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

Overarching Principle(s):

I am a contributing member of my care team. Nothing about me without me,

Rationale for Change:

I am a credible source of information and generate meaningful and material data for my care. Patient generated data is relevant to care; In care real-time, Historically, Iteratively, Prospectively. I am and necessary and important safety checkpoint. Create one use often in both EHR and patient facing systems. I am a health data exchange of one. I can contribute to CQM success, counseling, education, and adherence.

CORE— 31**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Record patient family health history as structured data.

MEANINGFUL USE Proposed Stage 2 Measure

More than 20% of all unique patients seen by the EP or admitted to the EH or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have a structured data entry for one or more first-degree relatives.

NUMERATOR

The number of patients in the denominator with a structured data entry for one or more first-degree relatives.

DENOMINATOR

Number of unique patients seen by the EP or admitted to the EH's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(13)

Family health history. Enable a user to electronically record, change, and access a patient's family health history.

STANDARDS**Specific recommendations for the standards:**

MU2: Patient generated questionnaire answers are incorporated into standard.

MU3: standard increased to include family history, medication adherence, care adherence, diet and exercise, observations of daily living, smoking status, patient intolerances, health history, surgical history, allergies, advanced directives.

WG LEAD(s) LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments**Overarching Principle(s):**

I am a contributing member of my care team. Nothing about me without me, I am a credible source of information and generate meaningful and material data for my care.

Rationale for Change:

Patient generated data is relevant to care; In care real-time, Historically, Iteratively, Prospectively. I am and necessary and important safety checkpoint. Create one use often in both EHR and patient facing systems. I am a health data exchange of one. I can contribute to CQM success, counseling, education, and adherence.

CORE— 32**EH only****MEANINGFUL USE Proposed Stage 2 Objective**

Generate and transmit permissible discharge prescriptions electronically (eRx).

MEANINGFUL USE Proposed Stage 2 Measure

More than 10% of hospital discharge medication orders for permissible prescriptions (for new or changed prescriptions) are compared to at least one drug formulary and transmitted electronically using Certified EHR Technology.

NUMERATOR

The number of prescriptions in the denominator generated, compared to a drug formulary and transmitted electronically.

DENOMINATOR

The number of new or changed prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances for patients discharged during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(b)(3) /§170.314(a)(10)

Electronic prescribing. Enable a user to electronically create prescriptions and prescription-related information for electronic transmission in accordance with:

- (i) The standard specified in § 170.205(b)(2); and
- (ii) At a minimum, the version of the standard specified in § 170.207(h).

Drug-formulary checks. Enable a user to electronically check if drugs are in a formulary or preferred drug list.

STANDARDS

§ 170.205(b)(2) (NCPDP SCRIPT version 10.6) and § 170.207(h) (RxNorm February 6, 2012 Release)

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments

CORE— 33**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

MEANINGFUL USE Proposed Stage 2 Measure

Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(f)(3) /§170.314(f)(4)

Public health surveillance. Enable a user to electronically record, change, and access syndrome-based public health surveillance information.

Transmission to public health agencies. Enable a user to electronically create syndrome-based public health surveillance information for electronic transmission in accordance with:

- (i) Ambulatory setting only.
 - (A) The standard specified in § 170.205(d)(2).
 - (B) Optional. The standard (and applicable implementation specifications) specified in § 170.205(d)(3).
- (ii) Inpatient setting only. The standard (and applicable implementation specifications) specified in § 170.205(d)(3).

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair
 Jim Hansen
 Arien Malec
 Liz Johnson

Workgroup Comments

CORE— 34**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

MEANINGFUL USE Proposed Stage 2 Measure

Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(f)(3) /§170.314(f)(4)

Public health surveillance. Enable a user to electronically record, change, and access syndrome-based public health surveillance information.

Transmission to public health agencies. Enable a user to electronically create syndrome-based public health surveillance information for electronic transmission in accordance with:

- (i) Ambulatory setting only.
 - (A) The standard specified in § 170.205(d)(2).
 - (B) Optional. The standard (and applicable implementation specifications) specified in § 170.205(d)(3).
- (ii) Inpatient setting only. The standard (and applicable implementation specifications) specified in § 170.205(d)(3).

STANDARDS

§ 170.205(i) (HL7 CDA, Release 2 and Implementation Guide for Healthcare Provider Reporting to Central Cancer Registries, Draft, February 2012); § 170.207(a)(3) (SNOMED CT® International Release January 2012); and § 170.207(g) (LOINC version 2.38)

WORK PRODUCT: This document is a work product for the Health IT Standards Committee and its Workgroups to support ongoing discussions and does not represent HHS policy or opinion.

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments

CORE— 35**EP only****MEANINGFUL USE Proposed Stage 2 Objective**

Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.

MEANINGFUL USE Proposed Stage 2 Measure

Successful ongoing submission of specific case information from Certified EHR Technology to a specialized registry for the entire EHR reporting period.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

General usage of Certified EHR Technology
(No specific certification criteria).

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments

CORE— 36**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

N/A

MEANINGFUL USE Proposed Stage 2 Measure

N/A

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(g)(1)

Automated numerator recording. For each meaningful use objective with a percentage-based measure, electronically record the numerator.

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments

CORE— 37**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

N/A

MEANINGFUL USE Proposed Stage 2 Measure

N/A

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(g)(2)

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.

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

CORE— 38**EP and EH****Workgroup Comments****MEANINGFUL USE Proposed Stage 2 Objective**

N/A

MEANINGFUL USE Proposed Stage 2 Measure

N/A

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(g)(3)

Non-percentage-based measure use report.

- (i) For each capability included in EHR technology that is also associated with a meaningful use objective and measure that is not percentage based, electronically record the date and time in accordance with the standard specified at § 170.210(g) when the capability was enabled, disabled, and/or executed.
- (ii) Enable a user to electronically create a report of the information recorded as part of paragraph (g)(3)(i).

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

CORE— 39**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

N/A

MEANINGFUL USE Proposed Stage 2 Measure

N/A

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(g)(4)

Safety-enhanced design. User-centered design processes must be applied to each capability an EHR technology includes that is specified in the following certification criteria: § 170.314(a)(1); § 170.314(a)(2); § 170.314(a)(6); § 170.314(a)(7); § 170.314(a)(8); § 170.314(a)(17); § 170.314(b)(3); and § 170.314(b)(4).

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:

CORE— 40**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

N/A

MEANINGFUL USE Proposed Stage 2 Measure

N/A

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(c)(1)-(3)

Clinical quality measures – capture and export.

- (i) Capture. Electronically record all of the data elements that are represented in the standard specified in § 170.204(c).
- (ii) Export. Electronically export a data file that includes all of the data elements that are represented in the standard specified in § 170.204(c).

Clinical quality measures – incorporate and calculate.

- (i) Incorporate. Electronically incorporate all of the data elements necessary to calculate each of the clinical quality measures included in the EHR technology.
- (ii) Calculate. Electronically calculate each clinical quality measure that is included in the EHR technology.

Clinical quality measures – reporting. Enable a user to electronically create for transmission clinical quality measurement results in a data file defined by CMS.

STANDARDS

§ 170.204(c) (NQF Quality Data Model)

WG LEAD(s)

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

Workgroup Comments:

CORE— 41**EP and EH****MEANINGFUL USE Proposed Stage 2 Objective**

Record electronic notes in patient records.
(Not proposed by CMS)

MEANINGFUL USE Proposed Stage 2 Measure

Record electronic notes in patient records for more than 30 percent of office visits.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(a)(9)

Electronic notes. Enable a user to electronically record, change, access, and search electronic notes.

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:

CORE— 42**EH only****MEANINGFUL USE Proposed Stage 2 Objective**

Provide structured electronic laboratory results to eligible professionals.
(Not proposed by CMS)

MEANINGFUL USE Proposed Stage 2 Measure

Hospital labs send (directly or indirectly) structured electronic clinical lab results to the ordering provider for more than 40 percent of electronic lab orders received.

NUMERATOR**DENOMINATOR****Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

§170.314(b)(6)

Inpatient setting only. Transmission of electronic laboratory tests and values/results to ambulatory providers.

Enable a user to electronically create laboratory tests and values/results for electronic transmission in accordance with:

- (i) The standard (and applicable implementation specifications) specified in § 170.205(k); and
- (ii) At a minimum, the version of the standard specified in § 170.207(g).

STANDARDS

§ 170.205(k) (HL7 2.5.1 and HL7 Version 2.5.1 Implementation Guide: Standards and Interoperability Framework Lab Results Interface, Release 1 (US Realm); and § 170.207(g) (LOINC version 2.38)

WG LEAD(s)

Leslie Kelly Hall-chair
Jim Hansen
Arien Malec
Liz Johnson

Workgroup Comments:

CORE— 43**EP and EH****Workgroup Comments:****MEANINGFUL USE Proposed Stage 2 Objective**

Maintain an up-to-date problem list of current and active diagnoses.

MEANINGFUL USE Proposed Stage 2 Measure

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.

NUMERATOR

The number of patients in the denominator who have at least one entry or an indication that no problems are known for the patient recorded as structured data in their problem list.

DENOMINATOR

Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(5)

Problem list. Enable a user to electronically record, change, and access a patient's problem list for longitudinal care in accordance with, at a minimum, the version of the standard specified in § 170.207(a)(3).

STANDARDS

§ 170.207(a)(3) (SNOMED CT[®] International Release January 2012)

WG LEAD(s)

Liz Jo Leslie Kelly Hall-chair

Jim Hansen

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CORE— 44**EP and EH****Workgroup Comments:****MEANINGFUL USE Proposed Stage 2 Objective**

Maintain active medication list.

MEANINGFUL USE Proposed Stage 2 Measure

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.

NUMERATOR

The number of patients in the denominator who have a medication (or an indication that the patient is not currently prescribed any medication) recorded as structured data.

DENOMINATOR

Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(6)

Medication list. Enable a user to electronically record, change, and access a patient's active medication list as well as medication history for longitudinal care.

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson

CORE— 45**EP and EH****Workgroup Comments:****MEANINGFUL USE Proposed Stage 2 Objective**

Maintain active medication allergy list.

MEANINGFUL USE Proposed Stage 2 Measure

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.

NUMERATOR

The number of unique patients in the denominator who have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data in their medication allergy list.

DENOMINATOR

Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Proposed 2014 Edition EHR CERTIFICATION CRITERIA

§170.314(a)(7)

Medication allergy list. Enable a user to electronically record, change, and access a patient's active medication allergy list as well as medication allergy history for longitudinal care.

STANDARDS**WG LEAD(s)**

Leslie Kelly Hall-chair

Jim Hansen

Arien Malec

Liz Johnson