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<tr>
<th>Proposed Stage 2 Objective</th>
<th>Proposed Stage 2 Measure</th>
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<td>Proposed Stage 2 Objective</td>
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<tr>
<td>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.</td>
<td>More than 60% of medication, laboratory, and radiology orders created by the EP or authorized providers of the EP’s or OAH’s inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.</td>
<td>The number of orders in the denominator recorded using CPOE.</td>
<td>Number of medication, radiology, and laboratory orders created by the EP or authorized providers in the eligible hospital’s or OAH’s inpatient or emergency department (POS 21 or 23) during the EHR reporting period.</td>
<td>§170.314(a)(1)</td>
<td>None.</td>
<td>EP Link EP Errata EH Link</td>
<td></td>
</tr>
<tr>
<td><strong>CPOE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Joe Heyman Liz Johnson John Travis</td>
</tr>
</tbody>
</table>

**Workgroup Comments**

- We suggest that the test procedure for this objective explicitly test for the kinds of qualifying activity that are expected to be a part of the measure so as to lend a better definition and representative example to the measure.

  - For example, for a medication order, define clinical test scenarios that address all of the kinds of activity that should be expected to qualify for CPOE appropriate to the venue for which the test is to be applied (hospital or EP) and the type of order at hand required by the certification criteria – so for medication orders, for a hospital, consider workflow scenarios in the test procedure to test CPOE for inpatient medication orders and prescriptions written at discharge or departure, for an EP, consider new prescriptions, renewals, refills and other similar activity.

  - Also address the context of a clinician acting under their own authority by making it clear what kinds of order entry should be tested to verify that the system can support workflows that reasonably count as CPOE such as:
    - Direct entry by the clinician
    - If allowed, entry by someone acting on the clinician's behalf as written orders
  - Also address situations that should not be counted for measurement in the testing scenario such as:
    - Verbal orders
    - Orders transcribed by someone not acting on their own authority
    - Etc.

  - Consider having the vendor show at least one example of how it supports definition of ordering privileges to support scope of practice rights that allow a practitioner to order on their own authority.

  - Test the ability to determine the difference between a patient that had no lab orders and a patient who did have lab orders but did not have them placed by CPOE.

  - We also suggest that the test procedure elaborate on the expected calculation and provide guidance to the tester on what factors are considered for measurement so that the calculation can be validated in an independent verifiable manner neutral to how a system knows what an order is per se, but such that numerator and denominator statements are clearly defined and reference-able by the tester.

  - For example, identify what counts as a “CPOE medication order” appropriate to a hospital and a EP based on the kinds of activities that should be credited to the numerator – something like:
    - For a hospital:
      - A new medication order to inpatient pharmacy
      - A new prescription written at discharge
      - A renewal of a prescription resumed at discharge
      - Etc.
    - For an EP:
      - A new prescription
      - A renewal of a prescription
      - A refill of a prescription

  - Given the CPOE objective as it is worded, we suggest it be made clear that in testing, the vendor should expect:
    - For lab results, is there an expected explicit linking of lab orders and lab results or is the test to look for lab orders and lab results that happen to occur during the reporting period for the same unique patients but without an explicit link?
    - We think it may be problematic for certification to require explicit order and result linking as many laboratory procedures are “group” or panel tests as an ordered diagnostic test and the results are available only as individual details.
    - Further, laboratory results performed by reference laboratories may have been based on requisitions and not outbound order interfaces, and explicit linking of a result received from a reference lab may be difficult to establish and limited by what the external reference lab sends with the result in terms of any order identifier.

    - For the denominator statement of the measure to be satisfied, the test procedure should be clear if the lab result must be structured or not – the objective and measure statement provided do not make this clear.
    - For radiology, the meaning of “test” needs to be made more explicit as to what kind of “test” – is it limited to diagnostic testing or does it also consider therapeutic or interventional procedures?
### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Proposed Stage 2 Objective</td>
<td>Proposed Stage 2 Measure</td>
<td>Number of prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances during the EHR reporting period.</td>
<td></td>
</tr>
<tr>
<td>Generate and transmit permissible prescriptions electronically (eRx).</td>
<td>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.</td>
<td>The number of prescriptions in the denominator generated, compared to a drug formulary and transmitted electronically.</td>
<td>The number of prescriptions in the denominator generated, compared to a drug formulary and transmitted electronically.</td>
</tr>
</tbody>
</table>

**Workgroup Comments**

- **Proposed Stage 2 Objective:** Generate and transmit permissible prescriptions electronically (eRx).
- **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.

**Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

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<th>STANDARDS</th>
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<tbody>
<tr>
<td>§170.314(b)(3); §170.314(e)(10)</td>
<td>EP Errata</td>
<td>David Kates, Joe Heyman, Kevin Brady</td>
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**CORE**

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<tbody>
<tr>
<td>Proposed Stage 2 Objective</td>
<td>Proposed Stage 2 Measure</td>
<td>3</td>
<td>Record the following demographics:</td>
<td>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.</td>
<td>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.</td>
<td>§170.314(a)(3)</td>
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Workgroup Comments
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</tr>
</thead>
</table>
| 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. | 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. | 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. | 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. | 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. | §170.314(a)(4) | VS Link | VS Errata | BMI Link | Growth Chart Link |

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<td>WG LEAD(s)</td>
</tr>
<tr>
<td>Record smoking status for patients 13 years old or older.</td>
<td>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.</td>
<td>The number of patients in the denominator with smoking status recorded as structured data.</td>
<td>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.</td>
<td>§170.314(a)(11)</td>
<td></td>
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</tbody>
</table>

**Workgroup Comments**

**CORE**

- **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). (smoking status types)
## MEANINGFUL USE Proposed Stage 2 Objective Proposed Stage 2 Measure NUMERATOR DENOMINATOR Proposed 2014 Edition EHR CERTIFICATION CRITERIA STANDARDS TPs WG LEAD(s)

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### Clinical decision support

1. **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:

   - Problem list;
   - Medication list;
   - Medication allergy list;
   - Demographics;
   - Laboratory tests and values/results; and
   - Vital signs.

2. **Linked referential clinical decision support.**

   - 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:
     - Problem list;
     - Medication list;
     - Medication allergy list;
     - Demographics;
     - Laboratory tests and values/results; and
     - Vital signs.

3. **Configure clinical decision support.**

   - 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:
     - A user’s role;
     - Clinical setting; and
     - Identified points in the clinical workflow.

4. **Drug-drug, drug-allergy interaction checks.** 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 drug-drug and drug-allergy contraindications based on medication list and medication allergy list.

5. **Adjustments.**

   - Enable the severity level of interventions provided for drug-drug interaction checks to be adjusted.
   - Limit the ability to adjust severity levels to an identified set of users or available as a system administrative function.

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**Workgroup Comments**

- For the test procedure, user should be defined or differentiated where appropriate for the role the "user" is to play in the test procedure to distinguish between a DBA/system administrator maintaining reference data for the definition of clinical decision support rules and end user provider/clinician interaction with the system as the one performing system actions that trigger CDS alerts and for interaction with CDS alerts
  - We would not assume the clinical end user should have the ability to modify CDS rule definition as reference data
  - The test procedure should make clear the ability of a system to support separation of duty for purpose of CDS maintenance versus end user access
- The test procedure should make clear how alert levels are differentiated by an end user role as a part of the CDS rule definition and then require the effect of changes in alert levels to be shown
- The test procedure should identify acceptable means (but not necessarily an inclusive list) of methods of notification and how they are configured as a part of rule definition
- The display of the CDS rule source information should be concretely stated as to valid options for that display – whether a display of textual information, links to internal or external sources or other means
  - The test procedure should clearly state if showing one means of referencing source information is acceptable or if multiple means of showing such information should be able to be tested
- The test procedure should support the capture of measurement data such as
  - Tracking overrides
  - Identifying the number of alerts fired
  - The provider identity and role of the user who took action in response to the alert
- The test procedure should make clear if the factors listed in the objective and criteria (e.g. demographics, problems) are all to be tested individually for clinical decision support or if they can be tested in combination
  - The test procedure should make clear that all such factors must be tested whether individually or in combination but that once tested, a second test involving the same factor is not needed unless the vendor finds it necessary to do so for testing other factors – e.g. testing based on a problem alone and then testing for a combination of problems and demographics for the sake of showing the impact of testing based on demographics
  - The test procedure should allow the vendor discretion to use factors in combination in a manner appropriate to the use of their CDS capabilities
- The concept of real time notification should allow for that to both be a case of interactive notification to the clinician end user and also for that to be a case of providing for a generation of an alert to another end user if the interactive end user is not someone who should be receiving the notice directly (e.g. a unit clerk entering orders on behalf of a physician with the rule alert going to the physician in some acceptable manner)
- The test procedure should include examples of valid clinical scenarios that constitute "notification" for vendor guidance
- The test procedure should include negative and positive qualification for the CDS rules

**Measure considerations**

Assuming there is a measure associated to this objective to prove that alerts are triggered and audit trails for them recorded:

- CDS rules may be of a variety of forms within the same system from drug alerting to critical result value alerting to significant changes in patient condition – the test procedure should clearly recognize that measurement data may be based on a number of source event tables and articulate how the measurement is to be compiled for testing considering that measurement data may draw from multiple sources based on the type of CDS rule at hand
## HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<th>WG LEAD(s)</th>
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<tbody>
<tr>
<td><strong>7</strong></td>
<td><strong>Incorporate clinical lab-test results into Certified EHR Technology as structured data.</strong></td>
<td>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.</td>
<td>Number of lab test results whose results are expressed in a positive or negative affirmation as a number which are incorporated in Certified EHR Technology as structured data.</td>
<td>§170.314(b)(1) Incorporate laboratory tests and values/results.</td>
<td>§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)</td>
<td>Link</td>
<td>Errata</td>
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### Workgroup Comments

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

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.

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

**Section 170.314(b)(1)**

- **Receive results.**
  - (A) Ambulatory setting only.
    - 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).
  - (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.

- **Display test report information.** Electronically display all of the information for a test report specified at 42 CFR 493.1291(c)(1) through (7).

- **Incorporate tests and values/results.** Electronically incorporate a laboratory test and value/result with a laboratory order or patient record.
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<tr>
<td><strong>CORE</strong></td>
<td></td>
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<td>$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.</td>
<td>None.</td>
<td></td>
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<tr>
<td>8 •</td>
<td>Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.</td>
<td>Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition.</td>
<td>None.</td>
<td>Link</td>
<td></td>
<td></td>
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<tr>
<td><strong>CORE</strong></td>
<td></td>
<td></td>
<td>$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.</td>
<td>None.</td>
<td>EP Link</td>
<td></td>
</tr>
<tr>
<td>9 •</td>
<td>Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care.</td>
<td>Number of patients in the denominator who were sent a reminder per patient preference during the EHR reporting period.</td>
<td>None.</td>
<td>EP Link</td>
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</table>

**Workgroup Comments**

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<td>10</td>
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<td>§170.314(a)(17)</td>
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</table>

**Proposed Stage 2 Objective**: Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).

**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.

**Numerators**

- The number of orders in the denominator tracked using eMAR.

**Denominators**

- 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.

**Workgroup Comments**

- We have provided clinical workflow scenario outlines for testing not only the "5 rights" related as to the "automated tracking" of medication orders (see accompanying spreadsheet) but also as to tracking when an administration event is due (NOTE: These scenarios are found in the accompanying Word document titled "Medication Reconciliation Objective – Suggested Scenarios for Test Procedure.doc.")
  - In this way, we suggest that part of the test be to help assure timely administration of the medication as part of the definition of "automatically tracked"

- We encourage that the automated tracking not specify a particular method of automation such as barcode scanning, RF devices or other similar technologies – all may be acceptable means of automation.

- The test procedure should provide for negative and positive outcomes of automated tracking.
  - What happens when this is the wrong patient?
  - What happens when this is the wrong medication?
  - What happens when this is the wrong dose?

- The test procedure should provide for differentiating automated versus manual means of administration of the "five rights" so that measure qualification conditions can be evaluated as met or not met.

- The test procedure should include testing for the necessary preconditions to set up the testing of the administration activity – so prerequisite medication orders and creation of medication tasks for administration.
  - For example, if the measure is to require automated tracking for patient identification or for other work steps that can be defined as conditions for numerator qualification, consider defining conditions for manual administration steps that are transcribed into the system that do not qualify for the numerator.

- We suggest that the test procedure make sure to include conditions to validate both positive and negative conditions for qualification for both numerator and denominator unique to the objective.
  - This may be difficult based on how systems distinguish automated from manual events but if feasible, this may be necessary to ascertain for qualifying instances of the numerator.

- We suggest that it be made clear what the meaning of "automated" is for purpose of the test procedure when the objective states that manual transcription should not be required – does that mean that all "five rights" activities are based on some automated method or is some manual interaction allowed such as patient selection, signing the administration event, performing witnessing if required for patient identification as completed and other steps that still may depend on user interaction to make an entry into the system?

**NEW Liz Johnson John Travis**

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**MEANINGFUL USE**

**Proposed Stage 2 Objective**

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

1. More than 50% of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days) the information available to the EP online access to their health information online.

2. More than 10% 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 the patient’s health information.

**Proposed Stage 2 Measure**

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.

**NUMERATOR**

The number of patients in the denominator who have timely (within 4 business days) the information available to the EP online access to their health information online.

**DENOMINATOR**

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

**Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

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<tbody>
<tr>
<td>§170.314(e)(1)</td>
<td>View, download, and transmit to 3rd party.</td>
<td>Andrea Sim (\text{EH Link}) Wes Rishel (\text{EH Link}) Rebecca Rockwood (\text{EH Link}) Bob Barker (\text{EH Link})</td>
</tr>
</tbody>
</table>

**CORE**

HSs and CHCs 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 health information during the reporting period.

**Proposed Stage 2 Objective**

Provision of health information to patients and their designated representatives.

**Proposed Stage 2 Measure**

Provide patients the ability to view a hospital admission.

**NUMERATOR**

The number of patients in the denominator whose information is available online within 36 hours of discharge.

**DENOMINATOR**

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 during the EHR reporting period.

**Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

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<td><strong>EP</strong></td>
<td></td>
<td>12</td>
<td></td>
<td>§170.314(b)(2)</td>
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#### Workgroup Comments
- Include a test step to validate patient accessibility (?).

**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 standards:
  - (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(h)(3);]
  - (G) Laboratory tests. At a minimum, the version of the standard specified in § 170.207(g);]
  - (H) Laboratory values/results. The values/results of the laboratory test(s) performed; and
  - (i) Medications. At a minimum, the version of the standard specified in § 170.207(h).}

**EP Link**
Joe Heyman
Bob Barker

**EP Errata**

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.
### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

#### Workgroup Comments

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<td>13</td>
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<tr>
<td><strong>13</strong></td>
<td></td>
<td>Use Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.</td>
<td>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.</td>
<td>Number of office visits by the EP during the EHR reporting period.</td>
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<tr>
<td><strong>WORKGROUP LEAD(s)</strong></td>
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<td>EP</td>
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</table>

**Proposed Stage 2 Objective:**

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

**Proposed Stage 2 Measure:**

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

**Meaningful Use:**

- 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.

**Certification Criteria:**

- Number of patients in the denominator who are subsequently provided patient-specific education resources identified by Certified EHR Technology.

**Standards:**

- §170.314(a)(16)

**TPs:**

- Link

**WG LEAD(s):**

- Ken Tarhoff

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<tr>
<td><strong>14</strong></td>
<td></td>
<td>Use secure electronic messaging to communicate with patients on relevant health information.</td>
<td>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 by more than 10% of unique patients seen during the EHR reporting period.</td>
<td>Number of unique patients seen by the EP during the EHR reporting period.</td>
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<tr>
<td><strong>WORKGROUP LEAD(s)</strong></td>
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<td>EP</td>
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<td>EH</td>
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</table>

**Proposed Stage 2 Objective:**

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

**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.

**Meaningful Use:**

- 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.

**Certification Criteria:**

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

**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.

**TPs:**

- NEW

**WG LEAD(s):**

- Ken Tarhoff

- Cris Ross

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**Workgroup Comments**

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<td>#</td>
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<td>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:</td>
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<td>(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.</td>
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<td>#</td>
<td>(ii) Enable a user to merge and remove individual data elements.</td>
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<tr>
<td>#</td>
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<td>#</td>
<td>(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.</td>
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**Workgroup Comments**
HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<td>#§170.314b(h)(1) / §170.314b(h)(2)</td>
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</table>

**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; 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:**
  - 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):
    - 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; 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.
    - Race and ethnicity.
    - The standard specified in § 170.207(h); and
    - The standard specified in § 170.207(j); and
    - The standard specified in § 170.207(m);
    - The value(s)/results of the laboratory tests performed.
    - Medications.
    - Laboratory tests.
    - Encounter diagnoses.

**Core Workgroup Comments**

**Workgroup Comments**

- EP Link
- EH Errata
- TP
- WG Lead(s)

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### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<tr>
<td>17</td>
<td></td>
<td>Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.</td>
<td>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.</td>
<td>§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: (i) The standard and applicable implementation specifications specified in § 170.205(e)(3); and (ii) At a minimum, the version of the standard specified in § 170.207(i).</td>
<td>§ 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)</td>
<td>Link</td>
<td>Cris Ross, Liz Johnson</td>
</tr>
</tbody>
</table>

**Workgroup Comments**

- We suggest that test data examples be developed by taking into account the common submission requirements of a representative sample of the State immunization registries based on what they are actually collecting via EHR based submission in Stage 1.
**HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures**

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<tr>
<td><strong>18</strong></td>
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<td></td>
<td>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.</td>
<td>§ 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)</td>
<td>fit link</td>
<td>John Travis, Cris Ross, Liz Johnson</td>
</tr>
</tbody>
</table>

### Workgroup Comments

- **We suggest that the data sets defined for use in this test procedure make sense clinically to support a more valid testing scenario – for example, do not pair an antibody test with a culture result**
  - For example, in the Stage 1 test procedure - Lab Reporting Test set 6 asks for an antibody test for Campylobacter Jejuni (AB test) from a stool culture. That does not seem valid because AB tests are done from blood.
- **We also suggest that the SNOMED and LOINC coding used match the laboratory test and specimen**
- **We suggest that the validation tool used for conformance testing be more flexible and not use any hard coded strings for validation purposes – for example, there was a local code that had to be hard coded to “99ZZZ” or “L” – either should have been valid.**
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<td></td>
<td>§170.314(f)(3); §170.314(f)(4)</td>
<td>Link</td>
<td>John Travis, Cris Ross, Liz Johnson</td>
</tr>
</tbody>
</table>

**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.

**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.

**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:
  1. Ambulatory setting only.
     1. The standard specified in §170.205(d)(2).
     2. Optional: The standard (and applicable implementation specifications) specified in §170.205(d)(3).
  2. Inpatient setting only.
     1. The standard (and applicable implementation specifications) specified in §170.205(d)(3).

**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:
  1. Ambulatory setting only.
     1. The standard specified in §170.205(d)(2).
     2. Optional: The standard (and applicable implementation specifications) specified in §170.205(d)(3).
  2. Inpatient setting only.
     1. The standard (and applicable implementation specifications) specified in §170.205(d)(3).

**Workgroup Comments**
- We suggest a conformance testing tool be developed for this test procedure so vendors can test the output file before going through certification.
- We support the use of the selected standards from Stage 1 but do offer the thought that The Centers for Disease Control (CDC) is publishing a recommendation for syndrome reporting that will include more data elements than were tested in Stage 1 – see http://www.cdc.gov/phin/library/guides/PHIN_MSG_Guide_for_SS_ED_and_UC_Data_v1_0.pdf

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<tr>
<td>20</td>
<td>• Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.</td>
<td>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), 45 CFR 164.306(d)(1), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.</td>
<td>§170.314(d)(1)</td>
<td>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; and (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.</td>
<td>None.</td>
<td><a href="#">link</a></td>
<td>David Kates, Liz Johnson, Joe Heyman, Ken Tarkoff, Carol Diamond</td>
</tr>
</tbody>
</table>

### Workgroup Comments

- Test criteria are high level and vague. It would be difficult for a vendor to understand the expectations that will be applied to being evaluated for meeting these criteria. It also leaves a lot of discretion to the tester. We think this may be appropriate at this stage of MU, this may be adequate and appropriate unless issues were reported.
- Test procedures imply role based security but they are unclear and need to be made more explicit to establish requirements for vendor and evaluation criteria.
## HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

### Proposed Stage 2 Objective

**Proposed Stage 2 Measure**

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### Workgroup Comments

- These criteria are very high level and vague, though they do explicitly establish information to be captured (date/time, user, patient, and “action taken”).
- We recommend being more explicit in describing the level of how the “action taken” should be captured (what was done, level of specificity viz. data, e.g., status change from/to, record level details, etc.). This level of detail would be necessary for the audit log to be valuable from a medico-legal perspective. Test procedures should address scenarios such as sequential changes to a record (e.g., problem list, medication history) to establish that actions taken can be tracked appropriately.

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

**Workgroup Comments**

- These criteria are very high level and vague, though they do explicitly establish information to be captured (date/time, user, patient, and “action taken”).
- We recommend being more explicit in describing the level of how the “action taken” should be captured (what was done, level of specificity viz. data, e.g., status change from/to, record level details, etc.). This level of detail would be necessary for the audit log to be valuable from a medico-legal perspective. Test procedures should address scenarios such as sequential changes to a record (e.g., problem list, medication history) to establish that actions taken can be tracked appropriately.

**Proposed 2014 Edition EHR CERTIFICATION CRITERIA**

**Audit Trail**

- **Audit Trail**
  - Auditable events and tamper-resistance.
  - **(i)** Enabled by default. The capability specified in paragraph (d)(2)(i) 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**

- § 170.314(d)(2) Auditable events and tamper-resistance.
  - **(i)** Enabled by default. The capability specified in paragraph (d)(2)(i) 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.

**TPs**

- Link

**WG LEAD(s)**

- David Kates
- Liz Johnson

**Link**

- [David Kates](#)
- [Bob Barker](#)
- [Liz Johnson](#)
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<td>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).</td>
<td>§ 170.210(e)(4) Record actions related to electronic health information, audit log status, and encryption of end-user devices.</td>
<td></td>
<td>David Kates</td>
<td>Bob Barker</td>
</tr>
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<td>CORE</td>
<td>• Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.</td>
<td>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)(iii) 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.</td>
<td>§ 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).</td>
<td></td>
<td>Liz Johnson</td>
<td></td>
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**Workgroup Comments**

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- We recommend being more explicit in describing the level of how the "action taken" should be captured (what was done, level of specificity viz. data, e.g., status change from/to, record level details, etc.). This level of detail would be necessary for the audit log to be valuable from a medico-legal perspective. Test procedures should address scenarios such as sequential changes to a record (e.g., problem list, medication history) to establish that actions taken can be tracked appropriately.

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<td>Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.</td>
<td>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.</td>
<td>§170.314(d)(4) Amendments: (i) Enable a user to electronically amend a patient’s health record to: (A) Replace existing information in a way that preserves the original information; and (B) 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.</td>
<td>None.</td>
<td>NEW</td>
<td></td>
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**Workgroup Comments**

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<tr>
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<td><strong>DESCRIPTION</strong></td>
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<tr>
<td>Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.</td>
<td>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.</td>
<td>§170.314(d)(5) Automatic log off: Terminate an electronic session after a predetermined time of inactivity.</td>
<td>None.</td>
<td>Link</td>
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</tbody>
</table>

**Workgroup Comments**

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## HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

### Proposed Stage 2 Objective

#### EP 25

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

- **NUMERATOR**
  - 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.

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

### Proposed Stage 2 Measure

#### EP 26

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

- **NUMERATOR**
  - 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.

### Workgroup Comments

**CORE**

**25**

- **Workgroup Comments**

**CORE**

**26**

- **Workgroup Comments**

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<tr>
<td>27</td>
<td>Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.</td>
<td>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)(ix) 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.</td>
<td>§170.314(d)(8)</td>
<td>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.</td>
<td>§ 170.314(d)(8) Link</td>
<td></td>
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**Workgroup Comments**

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<tr>
<td>28</td>
<td>Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.</td>
<td>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)(ix) 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.</td>
<td>§170.314(d)(8)</td>
<td>Optional. Accounting of disclosures. Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in §170.210(d).</td>
<td>§ 170.210(d) Link</td>
<td></td>
<td></td>
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**Workgroup Comments**

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<tr>
<td>Proposed Stage 2 Objective</td>
<td>Proposed Stage 2 Measure</td>
<td>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.</td>
<td>The number of patients in the denominator who have an indication of an advance directive status entered using structured data.</td>
<td>Inpatient setting only – advance directive. Enable a user to electronically record whether a patient has an advance directive.</td>
<td>§170.314(a)(18)</td>
<td>None.</td>
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<td>Proposed Stage 2 Objective</td>
<td>Proposed Stage 2 Measure</td>
<td>More than 40% of all scans and tests whose result is in an image ordered by the EP or by an authorized provider of the EH or CAH for patients admitted to its inpatient or emergency department (POS 21 and 23) during the EHR reporting period are accessible through Certified EHR Technology.</td>
<td>The number of results in the denominator that are accessible through Certified EHR Technology.</td>
<td>Imaging. Electronically indicate to a user the availability of a patient’s images and/or narrative interpretations (relating to the radiographic or other diagnostic test(s)) and enable immediate electronic access to such images and narrative interpretations.</td>
<td>§170.314(a)(12)</td>
<td>None.</td>
</tr>
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### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

**Workgroup Comments**

#### MENU

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<tr>
<td><strong>31</strong></td>
<td>Record patient family health history as structured data.</td>
<td>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.</td>
<td>The number of patients in the denominator with a structured data entry for one or more first-degree relatives.</td>
<td>§170.314(a)(13)</td>
<td>None.</td>
<td>NEW</td>
<td>John Travis Wes Rishel Liz Johnson Andrea Sim</td>
</tr>
</tbody>
</table>

**Workgroup Comments**

The following changes were proposed/discussed by the workgroup:

- Should we explicitly stipulate NCPDP 8.1 and 10.6 or just refer to "NCPDP 8.1 or later"? – Consensus was that referencing these two standards is appropriate since they are specifically stipulated in other regulations (ONC not proposing 8.1).
- Formatting issue – 4th bullet should be sub-bullet of 3rd bullet ("...We are therefore revising the standard to state.").
- NCPDP-SCRIPT 10.6 does not have EDIFACT (X12) version; only XML.
- Recommendations in separate document provided with more explicit and extensive examples of prescriptions to more thoroughly exercise the systems under test (related to Sig, DAW, refills, instructions to pharmacist, etc.) and provide guidance to the certifying organizations. Test procedures might also consider routing to retail and mail order pharmacies (see PVD segment Reference Number field and stipulate NCPDP IDs and pharmacy names for both).
- Also, need to consider requiring electronic prescribing of controlled substances as optional additional criterion for MU Stage 2 and potentially require in Stage 3.

**Workgroup Comments**

The following changes were proposed/discussed by the workgroup:

- Should we explicitly stipulate NCPDP 8.1 and 10.6 or just refer to “NCPDP 8.1 or later”? – Consensus was that referencing these two standards is appropriate since they are specifically stipulated in other regulations (ONC not proposing 8.1).
- Formatting issue – 4th bullet should be sub-bullet of 3rd bullet (“...We are therefore revising the standard to state.”).
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### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<tr>
<td>Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.</td>
<td>Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.</td>
<td>§170.314(f)(3)/§170.314(f)(4)</td>
<td>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. (B) The standard specified in §170.205(d)(2). (B) Optional. The standard (and applicable implementation specifications) specified in §170.205(d)(3).</td>
<td>§ 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)</td>
<td>Link</td>
<td>John Travis Cris Ross Liz Johnson</td>
</tr>
<tr>
<td>MENU</td>
<td>33</td>
<td>*</td>
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</table>

### Workgroup Comments
- We suggest a conformance testing tool be developed for this test procedure so vendors can test the output file before going through certification.
- We support the use of the selected standards from Stage 1 but do offer the thought that The Centers for Disease Control (CDC) is publishing a recommendation for syndrome reporting that will include more data elements than were tested in Stage 1 – see http://www.cdc.gov/phin/library/guides/PHIN_MSG_Guide_for_SS_ED_and_UC_Data_v1_0.pdf

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<td></td>
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</tr>
<tr>
<td><strong>34</strong></td>
<td>CAPABILITY TO IDENTIFY AND REPORT CANCER CASES TO A STATE CANCER REGISTRY, EXCEPT WHERE PROHIBITED, AND IN ACCORDANCE WITH APPLICABLE LAW AND PRACTICE.</td>
<td>SUCCESSFUL ONGOING SUBMISSION OF CANCER CASE INFORMATION FROM CERTIFIED EHR TECHNOLOGY TO A CANCER REGISTRY FOR THE ENTIRE EHR REPORTING PERIOD.</td>
<td>§170.314(f)(7) / §170.314(f)(8)</td>
<td>Ambulatory setting only – cancer case information.</td>
<td>Enable a user to electronically record, change, and access cancer case information.</td>
<td>NEW</td>
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**Workgroup Comments**

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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>35</strong></td>
<td>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.</td>
<td>SUCCESSFUL ONGOING SUBMISSION OF SPECIFIC CASE INFORMATION FROM CERTIFIED EHR TECHNOLOGY TO A SPECIALIZED REGISTRY FOR THE ENTIRE EHR REPORTING PERIOD.</td>
<td>General usage of certified EHR technology (No specific certification criteria).</td>
<td></td>
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</table>

**Workgroup Comments**

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### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<tbody>
<tr>
<td>36</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>Automated numerator recording. For each meaningful use objective with a percentage-based measure, electronically record the numerator.</td>
<td>None</td>
<td></td>
<td>NEW</td>
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<tr>
<td>37</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>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.</td>
<td>None</td>
<td></td>
<td>Link</td>
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**Workgroup Comments**
### HITSC Implementation Workgroup Input for Certification Criteria to Support MU Stage 2 Objectives and Measures

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<tr>
<td>38</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>§ 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). § 170.210(g) (synchronized clocks)</td>
<td>NEW</td>
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<tbody>
<tr>
<td>39</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>§ 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). None.</td>
<td>NEW</td>
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### Proposed Stage 2 Objective

**Meaningful Use**

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| N/A                        | N/A                      | §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). |
|                            |                          | §170.204(c) (NQF Quality Data Model) |
|                            |                          | §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. |

**Workgroup Comments**

**EP Link**

**EH Link**
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Record electronic notes in patient records. (Not proposed by CMS)</td>
<td>Record electronic notes in patient records for more than 30 percent of office visits.</td>
<td><strong>Electronic notes.</strong> Enable a user to electronically record, change, access, and search electronic notes.</td>
<td>None.</td>
<td>NEW</td>
<td>Ken Tarkoff Bob Barker Joe Heyman Liz Johnson</td>
</tr>
</tbody>
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<tr>
<td>42</td>
<td>* Provide structured electronic laboratory results to eligible professionals. (Not proposed by CMS)</td>
<td>Hospital labs send (directly or indirectly) structured electronic clinical lab results to the ordering provider for more than 40% of electronic lab orders received.</td>
<td></td>
<td></td>
<td>§ 170.314(b)(6)</td>
<td></td>
<td>NEW</td>
</tr>
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</table>

**Workgroup Comments**

Hospitals labs send (directly or indirectly) structured electronic clinical lab results to outpatient providers for more than 40% of electronic orders received

**Issue:** Discussion has revealed confusion on computing the ratio because a single order often generates multiple results that may be sent at different times.

**Suggestion:** Clarify the intent of the workgroup

**Workgroup Statement on Intent:** The included results in the denominator are only those lab test results completed for outpatient services and excludes the results generated for inpatient services. Similarly, the denominator should include all those test results that are electronically entered into the hospital lab system, either through electronic submission from the outpatient provider or manually entered into the electronic lab system by the hospital employee. The denominator would exclude any lab services provided as third party or outsources services to other hospitals or similar entities.

**Issue:** Confusion about whether the term "test results that are electronically entered into the lab system" refers to literally to results or to the results that arise in fulfilling orders entered into the lab system. Assumption: the latter.

**Issue:** Confusion on the meaning of "all those test results that are electronically entered into the hospital lab system, either through electronic submission from the outpatient provider or manually entered into the electronic lab system by the hospital employee." Since manual entry is included in the denominator we suggest the policy committee consider the revised language below.

**Issue:** How to count retransmissions due to the fulfillment of other results within a battery or amendments to a result.

**Proposed Resolution:** Coordinate with policy group to revise the statement of intent. Suggested revision (with the second option being favored by the HITSC IWG):

**Workgroup Statement on Intent:** The included results in the denominator are only those lab test results completed for outpatient services and excludes the results generated for inpatient services. Similarly, the denominator should include all those test results for which orders are electronically entered into the hospital lab system, either through electronic submission from the outpatient provider or manually entered into the electronic lab system by the hospital employee. The denominator would exclude any lab services provided as third party or outsources services to other hospitals or similar entities. The numerator and denominator would exclude any retransmission of results.

Or, an alternative based on orders:

**Workgroup Statement on Intent:** The denominator should include all orders entered all unique orders for outpatient services including those entered electronically and those entered manually by hospital personnel.

The numerator should include all unique orders for which one or more of the results were transmitted electronically as structured data.

**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.
## Workgroup Comments

- **Need for the longitudinal aspect of the criteria to be well defined based on the definition from the HITPC with testing criteria well aligned to address the definition.**
- **Recommend adding a test procedure to validate that a patient chart with no diagnosed problems has an explicit indicator that this was the intention of the user. The explicit entry of “no new problem diagnosed” for a patient with other existing diagnosed problems should not be included in this test step.**
- **Need a clear definition for longitudinal care. Patient-centric definition should reflect longitudinal care across the continuum of care in both ambulatory (multiple encounters) and inpatient (multiple hospitalizations). See proposed rule preamble for discussion (Note: change in definition will effect medication list and medication allergy list certification criteria – potentially making them “revised” certification criteria instead of “unchanged”).**
- **In order for some Practices to meet MU, users would have to explicitly enter into the chart that there was no new diagnosis, which does not improve patient care and causes users extra steps for the sole purpose of counting.**
  - A simple solution would be to be sure it is possible to enter problems in the problem list.
  - e.g., “Evidence-based Prevention”, is not quite a problem, but may be a valid reason for a visit. And if an annual physical in a healthy 35-year-old involves neither a problem nor a legitimate reason for visit, so be it.
  - One issue is the importance of recording that a physician has determined there is no problem as opposed to assuming that a record exists in EMR with no problem stated. This is clearly more important in a multi-user EHR than a single user EHR and it is also important in order to be interoperably convey the state of the record.
  - Requiring a Chart for a patient with no entered Diagnosis should be tested, but specifically recording no new problems for a visit/encounter for a patient with existing problems should not be required.

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### Table 1

<table>
<thead>
<tr>
<th>MEANINGFUL USE</th>
<th>NUMERATOR</th>
<th>DENOMINATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1 Objective</strong></td>
<td><strong>Stage 1 Measure</strong></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Maintain an up-to-date problem list of current and active diagnoses.</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>MEANINGFUL USE</th>
<th>NUMERATOR</th>
<th>DENOMINATOR</th>
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</thead>
<tbody>
<tr>
<td><strong>Stage 1 Objective</strong></td>
<td><strong>Stage 1 Measure</strong></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Maintain active medication list.</td>
<td>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.</td>
</tr>
<tr>
<td>ID</td>
<td>MEANINGFUL USE</td>
<td>NUMERATOR</td>
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<tr>
<td>45</td>
<td>Maintain active medication allergy list. More than 80% of all unique patients seen by the EP or admitted to the eligible hospital’s or CAH’s inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data.</td>
<td>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.</td>
</tr>
</tbody>
</table>

Workgroup Comments