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**HITSC Implementation Workgroup Recommendations for Certification Criteria, Standards, and Implementation Specifications to Support HITPC Proposed MU Stage 2 Objectives and Measures**

Row	HITPC Proposed MU Stage 2 Objective/Measure & Direction to HITSC	Adopted Certification Criterion <i>Ambulatory /Inpatient</i>	Recommended New or Revised Certification Criterion	Recommended Standard(s) and/or Implementation Specification(s)
1	<p>CPOE</p> <p>Medications: Increase threshold to 60%</p> <p>Lab: More than 60% of unique patients seen during the reporting period with at least one lab test result returned during the reporting period have at least one lab order entered during the reporting period using CPOE</p> <p>Radiology: At least one radiology test is ordered using CPOE (unless no radiology test is ordered)</p>	<p>§ 170.304(a) (Ambulatory only)</p> <p>§ 170.306(a) (Inpatient Only)</p> <p>Computerized provider order entry. Enable a user to electronically record, store, retrieve, and modify, at a minimum, the following order types: (1) Medications; (2) Laboratory; and (3) Radiology/imaging.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p>	<p>None.</p>
2	<p>DD/DA</p> <p>Employ drug interaction checking (drug-drug, drug-allergy) with the ability for the providers to refine DDI rules.</p>	<p>§ 170.302(a)</p> <p>Drug-drug, drug-allergy interaction checks.</p> <p>(1) Notifications. Automatically and electronically generate and indicate in real-time, notifications at the point of care for drug-drug and drug-allergy contraindications based on medication list, medication allergy list, and CPOE.</p> <p>(2) Adjustments. Provide certain users with the ability to adjust notifications provided for drug-drug and drug-allergy interaction checks.</p>	<p>Drug-drug, drug-allergy interaction checks.</p> <p>(1) Notifications. Automatically and electronically generate and indicate, before the order is executed, notifications at the point of care for drug-drug and drug-allergy contraindications based on medication list and medication allergy list during CPOE.</p> <p>(2) Adjustments.</p> <p>(a) Enable the ability to adjust severity level of notifications provided for drug-drug interaction checks.</p> <p>(b) Limit the ability to an identified set of users or available as a system administrative function.</p> <p><b>Workgroup Statement on Intent</b></p> <p>Chose to interpret “refined DDI rules” as the “ability to adjust severity level of notifications”. Unclear if this was the specific intent of the HITPC. The criterion was also revised to improve clarity, particularly for testing and certification.</p>	<p>None.</p>

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3	<p>Electronic Prescribing</p> <p><i>EPs (Ambulatory only):</i> Raise threshold to 50% of an electronic prescription medication orders transmitted as</p> <p><i>EHs (Inpatient Only): (NEW)</i> Generate and transmit 10% of all hospital discharge orders for permissible prescriptions electronically</p>	<p>§ 170.304(b) (Ambulatory only)</p> <p><i>Ambulatory only: Electronic prescribing. Enable a user to electronically generate and transmit prescriptions and prescription-related information in accordance with:</i></p> <p>(1) The standard specified in §170.205(b)(1) or §170.205(b)(2); and            (2) The standard specified in 170.207(d).</p>	<p>No revision recommended for ambulatory setting except to move to RxNorm as the vocabulary standard.</p> <p><b>For inpatient setting:</b></p> <p><i>Electronic prescribing. Enable a user to electronically generate and transmit discharge prescriptions and prescription-related information in accordance with:</i></p> <p>(1) <i>The standard specified in §170.205(b)(1) or § 170.205(b)(2);</i>            (2) <i>The standard specified in 170.207(d); and</i>            (3) <i>One of the standards specified in _____.</i></p> <p><b>Workgroup Statement on Intent</b></p> <p>The standards that are available under number (3) above are the HL7 versions recommended by the <b>e-Prescribing of Discharge Meds Power Team</b>.</p>	<p>NCPDP SCRIPT 8.1 &amp; 10.6</p> <p>Note: 10.6 is required by CMS under Part D in regulation</p> <p>RxNorm</p> <p>The standards for e-prescribing discharge should also include the HL7 versions recommended by the <b>e-Prescribing of Discharge Meds Power Team</b> (meet one).</p>

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4	<p>Demographics</p> <ul style="list-style-type: none"> <li>• preferred language</li> <li>• gender</li> <li>• race</li> <li>• ethnicity</li> <li>• date of birth</li> <li>• <b>Inpatient Only: date and preliminary cause of death in the event of mortality in the eligible hospital or CAH</b></li> </ul> <p>Raise threshold to 80% for all unique patients with the ability to use the data to produce stratified quality reports.</p>	<p>§ 170.304(c) (<i>Ambulatory only</i>) § 170.306(b) (<i>Inpatient Only</i>)</p> <p>Record demographics. Enable a user to electronically record, modify, and retrieve patient demographic data including preferred language, gender, race, ethnicity, date of birth, (<b>Inpatient Only: and date and preliminary cause of death in the event of mortality.</b>) Enable race and ethnicity to be recorded in accordance with the standard specified at § 170.207(f).</p>	<p>Revised to include new standard for preferred language.</p>	<p>Use ISO 639-1 standard for preferred language</p> <p>Maintain OMB standards for race and ethnicity</p>
5	<p>Problem List</p> <p><b>No proposed change</b></p>	<p>§ 170.302(c)</p> <p>Maintain up-to-date problem list. Enable a user to electronically record, modify, and retrieve a patient’s problem list for longitudinal care in accordance with:</p> <p>(1) The standard specified in §170.207(a)(1); or (2) At a minimum, the version of the standard specified in §170.207(a)(2).</p>	<p>Revise to replace ICD-9-CM with ICD-10-CM contingent on the implementation date for ICD-10-CM remains October 1, 2013 and is not delayed.</p> <p><b>Workgroup Note</b> 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). Definition is used in rows 5, 6, 7, &amp; 22.</p>	<p>ICD-10-CM Maintain SNOMED CT with appropriate version.</p>
6	<p>Medication List</p> <p><b>No proposed change</b></p>	<p>§ 170.302(d)</p> <p>Maintain active medication list. Enable a user to electronically record, modify, and retrieve a patient’s active medication list as well as medication history for longitudinal care.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p>	<p>None.</p>

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7	Medication Allergy List  <b>No proposed change</b>	§ 170.302(e)  Maintain active medication allergy list. Enable a user to electronically record, modify, and retrieve a patient’s active medication allergy list as well as medication allergy history for longitudinal care.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.  <b>Workgroup Statement on Intent</b> We recognize that an EHR will likely include both medication allergies and adverse medication reaction information in the same location. We are assuming that both types of information are included in this requirement.	None.
8	Vital Signs  Raise threshold to 80% of all unique patients; change patient age for collecting blood pressure from 2 to 3 and older	§ 170.302(f)  Record and chart vital signs.  (1) Vital signs. Enable a user to electronically record, modify, and retrieve a patient’s vital signs including, at a minimum, height, weight, and blood pressure.  (2) Calculate body mass index. Automatically calculate and display body mass index (BMI) based on a patient’s height and weight.  (3) Plot and display growth charts. Plot and electronically display, upon request, growth charts for patients 2-20 years old.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	None.
9	Smoking Status  Raise threshold to 80% of all unique patients	§170.302(g)  Smoking status. Enable a user to electronically record, modify, and retrieve the smoking status of a patient.  Smoking status types must include: current every day smoker; current some day smoker; former smoker; never smoker; smoker, current status unknown; and unknown if ever smoked.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	None.

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10	<p>Clinical Decision Support</p> <p>Use CDS to improve performance on high-priority health conditions;</p> <p><b>HIT Standards Committee:</b> Establish the following CDS attributes for the purposes of certification:</p> <p>(1) Display source/citation of CDS</p> <p>(2) Configurable based on patient context (e.g., inpatient, outpatient, problems, meds, allergies, lab results)</p> <p>(3) Presented at a relevant point in clinical workflow</p> <p>(4) Alerts presented to users who can act on alert (e.g., licensed professionals)</p> <p>(5) Can be integrated with EHR (i.e., not standalone)</p>	<p>§ 170.304(e) (<i>Ambulatory only</i>)</p> <p>§ 170.306(c) (<i>Inpatient Only</i>)</p> <p>(1) Implement rules. Implement automated, electronic clinical decision support rules (in addition to drug-drug and drug-allergy contraindication checking) based on the data elements included in: problem list; medication list; demographics; and laboratory test results.</p> <p>(2) Notifications. Automatically and electronically generate and indicate in real-time, notifications and care suggestions based upon clinical decision support rules.</p>	<p><i>Clinical decision support.</i></p> <p>(1) <i>Decision support rules.</i> Enable a user to select (or activate) one or more automated, electronic clinical decision support rules (in addition to drug-drug and drug-allergy contraindication checking) based on the data elements included in:</p> <ul style="list-style-type: none"> <li>(i) Problem list;</li> <li>(ii) Medication list;</li> <li>(iii) Medication allergy list;</li> <li>(iv) Demographics;</li> <li>(v) Laboratory test results; and</li> <li>(vi) Vital signs.</li> </ul> <p>(2) <i>Configure rules.</i> Enable decision support rules to be configured based on each of the following:</p> <ul style="list-style-type: none"> <li>(i) A user’s role;</li> <li>(ii) Specific patient settings; and</li> <li>(iii) Identified points in the clinical workflow.</li> </ul> <p>(3) <i>Notifications and care suggestions.</i> Automatically and electronically generate notifications and care suggestions based upon clinical decision support rules selected and configured in accordance with paragraphs (1) and (2) of this section.</p> <p>(4) <i>Display rule source information.</i> Enable a user to review the clinical evidence or source information attributed to each clinical decision support rule when a notification or care suggestion is indicated.</p> <p><b>Workgroup Statement on Intent</b></p> <ul style="list-style-type: none"> <li>• CDS rules should be able to be configured based on data elements in any of (1)(i) – (vi) or a combination of data elements in (1)(i)-(vi), but not necessarily based on data elements from all of (1)(i)-(vi) if that is not clinically feasibly or acceptable.</li> <li>• CDS rules should be capable of being configured based on any one or combination of the criteria listed in (2)(i)-(iii).</li> <li>• Notifications and care suggestions are different. A notification could be an alert, warning or a piece of information/data that may lead to an action, while a care suggestion provides a suggested action.</li> </ul>	None.

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11	Drug Formulary Check  <b>Move to Core;</b> Implement drug formulary checks according to local needs (e.g., using internal or external formularies, which may include generic substitution as a “formulary check”)	§ 170.302(b)  Drug-formulary checks. Enable a user to electronically check if drugs are in a formulary or preferred drug list.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	None.
12	Clinical Quality Measures	<p>§ 170.304(j) (<i>Ambulatory only</i>)</p> <p>Calculate and submit clinical quality measures.</p> <p>(1) Calculate.</p> <p>(i) Electronically calculate all of the core clinical measures specified by CMS for eligible professionals.</p> <p>(ii) Electronically calculate, at a minimum, three clinical quality measures specified by CMS for eligible professionals, in addition to those clinical quality measures specified in paragraph (1)(i).</p> <p>(2) Submission. Enable a user to electronically submit calculated clinical quality measures in accordance with the standard and implementation specifications specified in § 170.205(f).</p> <p>§ 170.306(i) (<i>Inpatient Only</i>)</p> <p>Calculate and submit clinical quality measures.</p> <p>(1) Calculate. Electronically calculate all of the clinical quality measures specified by CMS for eligible hospitals and critical access hospitals.</p> <p>(2) Submission. Enable a user to electronically submit calculated clinical quality measures in accordance with the standard and implementation specifications specified in §170.205(f).</p>	No recommended certification criteria.	ONC should consult with CMS as appropriate.

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13	<p>Advance Directives</p> <p><b>EHs (Inpatient Only): Move to Core;</b> For 50% of patients 65 years and older, record whether an advance directive exists (with date and timestamp of recording) and provide access to a copy of the directive itself if it exists</p> <p><b>EPs: (Ambulatory only) (NEW) Core;</b> For at least 25 unique patients, record whether an advance directive exists (with date and timestamp of recording) and provide access to a copy of the directive itself if it exists</p>	<p>§ 170.306(h) <i>(Inpatient Only)</i></p> <p><b>Inpatient Only: Advance directives. Enable a user to electronically record whether a patient has an advance directive.</b></p>	<p><b>Inpatient and Ambulatory</b></p> <p>Advance directives. Enable a user to electronically:</p> <ol style="list-style-type: none"> <li>(1) Record whether a patient has an advance directive;</li> <li>(2) Store an advance directive; and</li> <li>(3) Provide access to a copy of the advance directive in human readable format.</li> </ol> <p><b>Workgroup Statement on Intent:</b></p> <p>We expect that the EHR would be capable of recording and storing historical advance directives as well as the current version. We consider scanned images and similar non-structured electronic files acceptable formats for this requirement. Furthermore the copy provided does not have to be in a structured format.</p>	None.
14	<p>Incorporate Lab Test Results</p> <p><b>Move to Core;</b> Incorporate clinical lab-tests results into certified EHR technology as structured data for more than 40% of all clinical lab tests results ordered whose results are either in a positive/negative or numerical format</p> <p><b>Note to HIT Standards Committee:</b> Use LOINC where available</p>	<p>§ 170.302(h)</p> <p>Incorporate laboratory test results.</p> <ol style="list-style-type: none"> <li>(1) <i>Receive results.</i> Electronically receive clinical laboratory test results in a structured format and display such results in human readable format.</li> <li>(2) <i>Display test report information.</i> Electronically display all the information for a test report specified at 42 CFR 493.1291(c)(1) through (7).</li> <li>(3) <i>Incorporate results.</i> Electronically attribute, associate, or link a laboratory test result to a laboratory order or patient record</li> </ol>	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	None.

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15	<p>Send Laboratory Test Results</p> <p><b>EHs (Inpatient Only): (NEW)</b> Hospitals labs send (directly or indirectly) structured electronic clinical lab results to outpatient providers for more than 40% of electronic orders received</p> <p><b>HIT Standards Committee:</b> Use LOINC where available</p>		<p><b>Inpatient Only: Send laboratory test results. Electronically send clinical laboratory test results to outpatient providers using the specified standard.</b></p> <p><b>Workgroup Statement on Intent:</b></p> <p>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 outsourced services to other hospitals or similar entities.</p>	<p>ONC should consider the S&amp;I-referenced LRI Implementation Guide</p>
16	<p>Patient Lists</p> <p><b>Move to Core;</b> Generate lists of patients by multiple specific parameters to use for quality improvement, reduction of disparities, research or outreach</p>	<p>§ 170.302(i)</p> <p>Generate patient lists. Enable a user to electronically select, sort, retrieve, and generate lists of patients according to, at a minimum, the data elements included in:</p> <p>(1) Problem list;</p> <p>(2) Medication list;</p> <p>(3) Demographics; and</p> <p>(4) Laboratory test results.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p>	<p>None.</p>



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17	<p>Patient Reminders</p> <p><i>EPs (Ambulatory only): Move to Core</i>; More than 10% of all active patients are sent a clinical reminder</p> <p>(reminder for existing appointment does not count); extends the denominator to include all age groups; Request to HITSC: Define “active patient” (e.g., all patients seen within 24 months)</p>	<p>§ 170.304(d) (<i>Ambulatory only</i>)</p> <p>Patient reminders. Enable a user to electronically generate a patient reminder list for preventive or follow-up care according to patient preferences based on, at a minimum, the data elements included in:</p> <p>(1) Problem list;            (2) Medication list;            (3) Medication allergy list;            (4) Demographics; and            (5) Laboratory test results.</p>	<p><i>Ambulatory only:</i></p> <p>Patient reminders. Enable a user to electronically generate clinically relevant patient reminders on all active patients for preventive or follow-up care according to patient preferences based on, at a minimum, the data elements included in:</p> <p>(1) Problem list;            (2) Medication list;            (3) Medication allergy list;            (4) Demographics; and            (5) Laboratory test results.</p> <p><b>Workgroup Statement on Intent:</b>            A clinically relevant reminder is consistent with the specific entries in a patients’ problem list, medication list, medication allergy list, demographics and lab test results.</p> <p><b>Active Patient Definition</b>            Active patients are defined as all unique patients who have had an office visit with the EP within the previous 24 months.</p> <p><b>Patient Communication Medium Preference</b>  <i>See Row 27</i></p>	None.

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18	<p>Electronic notes</p> <p><b>EPs (Ambulatory only): (NEW)</b> Enter at least one electronic note, broadly defined, by a physician, physician assistant, or nurse practitioner for more than 30% of unique visits (non-searchable, scanned notes do not qualify)</p> <p><b>EHS (Inpatient Only): (NEW)</b> Enter at least one electronic note, broadly defined, by a physician, physician assistant, or nurse practitioner for more than 30% of eligible hospital days (non-searchable, scanned notes do not qualify)</p>		<p>Electronic notes</p> <p>Enable a user to electronically record, retrieve, and search a physician, physician assistant, or nurse practitioner’s note.</p> <p><b>Workgroup Note</b> Defer final definition for “eligible hospital days” to CMS. Potential “eligible hospital days” definition: The number of days of care charged to a beneficiary for inpatient hospital care services is always in units of full days. A day begins at midnight and ends 24 hours later. The midnight-to-midnight method is to be used in counting days of care for Medicare reporting purposes.</p> <p><b>Consideration/clarification:</b> Does the definition need to be broadened to support the ED treat and release patients? Patients discharged from the ED should probably use a per visit measurement methodology</p> <p>Per the Meaningful Use Workgroup, free text is fine. It just cannot be scanned. So we do not need a detailed standard for the note structure. It could be a visit note, progress note, admit note, consult note, or any other similar clinical note.</p>	None.

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19	<p>eMAR</p> <p><b>EHs (Inpatient Only):</b> <b>(NEW)</b> Medication orders automatically tracked via electronic medication administration record in-use in at least one hospital ward/unit (“automatically” implies “5 rights” are recorded without manual transcription and that this is done within the CEHRT)</p> <p><b>HIT Standards Committee:</b></p> <p>The tracking system should be able to:</p> <ul style="list-style-type: none"> <li>• Check for right patient</li> <li>• Check right medication</li> <li>• Check right dose</li> <li>• Check right route</li> <li>• Record time medication administered</li> </ul>		<p><b>Inpatient Only:</b> <b>Electronic Medication Administration</b></p> <p>Utilize an electronic medication administration record which supports the following process:</p> <ol style="list-style-type: none"> <li>(1) <b>Right Patient:</b> Enable a user to electronically identify and select a patient using a validation methodology to ensure the patient’s identification matches the electronic medication administration record displayed.</li> <li>(2) <b>Right Medication:</b> Enable a user to electronically validate a match of physical medication product to existing order using barcode reader (or other assisted technology) or visually match existing medication order in electronic medication administration record against physical medication product</li> <li>(3) <b>Right Dose:</b> Enable user to electronically validate the dose of physical medication product to existing order using barcode reader (or other assisted technology) or visually match existing medication dose in electronic medication administration record against physical medication product</li> <li>(4) <b>Right Route:</b> Using drug form as a proxy for correct route the electronic system validates the dosage form as safe and compatible with the route of administration for the identified order. The route is validated with visual match to electronic medication administration record.</li> <li>(5) <b>Record time medication administration:</b> Require that timestamp and user identification records electronically at the time of medications administration.</li> </ol> <p><b>Workgroup Statement on Intent</b> This draft language describes broad capabilities subject to interpretation during certification testing, and thus will need to be further refined.</p>	None.
20	<p>Electronic Copy of Discharge Instructions</p> <p><b>ELIMINATE</b> objective and measure by combining discharge instructions into view and download</p>	<p>§ 170.306(e) (<i>Inpatient Only</i>)</p> <p><i>Inpatient Only:</i> Electronic copy of discharge instructions. Enable a user to create an electronic copy of the discharge instructions for a patient, in human readable format, at the time of discharge on electronic media or through some other electronic means.</p>	<b>Capabilities combined into new certification criterion recommended in row 23.</b>	N/A

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21	<p>Electronic Copy of Health Information</p> <p><b>ELIMINATE</b> objective and measures by combining access to health information into view and download</p>	<p>§ 170.304(f) (Ambulatory only) 170.306(d) (Inpatient Only)</p> <p>Electronic copy of health information.  <b>Inpatient only: (1)</b> Enable a user to create an electronic copy of a patient’s clinical information, including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, and <b>Inpatient only: procedures:</b>  <b>Ambulatory only: (1) Inpatient only: (i)</b> Human readable format; and  <b>Ambulatory only: (2) Inpatient only: (ii)</b> On electronic media or through some other electronic means in accordance with:  <b>Ambulatory only: (i) Inpatient only: (A)</b> The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and  <b>Ambulatory only: (ii) Inpatient only: (B)</b> For the following data elements the applicable standard must be used:  <b>Ambulatory only: (A) Inpatient only: (1)</b> Problems. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);  <b>Inpatient only: (2) Procedures. The standards specified in §170.207(b)(1) or §170.207(b)(2);</b>  <b>Ambulatory only: (B) Inpatient only: (3)</b> Laboratory test results. At a minimum, the version of the standard specified in §170.207(c); and  <b>Ambulatory only: (C) Inpatient only: (4)</b> Medications. The standard specified in §170.207(d).  <b>Inpatient only: (2)</b> Enable a user to create an electronic copy of a patient’s discharge summary in human readable format and on electronic media or through some other electronic means.</p>	<p><b>Capabilities combined into new certification criterion recommended in row 23.</b></p>	<p>N/A</p>

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22	<p>Timely Access</p> <p><b>EPs (Ambulatory only): Move to Core;</b> More than 10% of all unique patients/families view and have the ability to download their longitudinal health information; information is available to all patients within 24 hours of an encounter (or within 4 days after information is available to EPs)</p> <p>The download should maintain the structure of the recorded data where interoperability standards exist.</p>	<p>§ 170.304(g) (Ambulatory only)</p> <p>Ambulatory only: Timely access. Enable a user to provide patients with online access to their clinical information, including, at a minimum, lab test results, problem list, medication list, and medication allergy list.</p>	<p><b>Capabilities combined into new certification criterion recommended in row 23.</b></p>	<p>N/A</p>

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23	<p>View and Download</p> <p><b>EHs (Inpatient only):</b> More than 10% of patients/families view and have the ability to download information about a hospital admission; information is made available within 36 hours of discharge</p> <p>Information available for view and download should include discharge instructions, which are available immediately upon discharge.</p> <p><b>Note to HITSC:</b> It should be clear that the number of views and the number of downloads should be electronically counted/tracked for issues of compliance and measurement.</p>		<p><b>Combines previous certification criteria requirements in rows 20, 21, &amp; 22.</b></p> <p><b>Rows 46-49 of this table apply only to this certification criterion.</b></p> <p><b>Ambulatory and Inpatient</b></p> <p>View and Download for patients: Enable a user to provide patients with the ability to view and download their longitudinal health information online, and to electronically transmit this information directly to patients. Also, enable users to track transmission events and when information is viewed and downloaded. Information must include, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, procedures, clinical summaries and discharge instructions, and be provided in:</p> <p>(i) Human readable format;</p> <p>(ii) The appropriate standard (and applicable implementation specifications) specified in _____ and with data elements using applicable standards;</p> <p>(1) [Enumeration of data elements and applicable standards]</p> <p>(iii) Track the number of patient online accesses (view and download) or transmission events.</p> <p><b>Workgroup Statement on Intent</b></p> <p>Electronic access via online access is intended to include an online portal and/or PHR directly tied to the EHR or a third party patient portal and or PHR that is connected to the EHR. The third party solution (PHR and/or patient portal) may be directly connected to that EHR or through an HIE connection that offers electronic patient access. Similarly, the intention here is that the EHR needs to demonstrate one of these options for certification (not all of them). In essence, any means for providing patients the ability to view and download consistent with this certification criterion is acceptable.</p>	<p>No change to summary record standards discussed.</p> <p>Changes to vocabs would generally be reflective of changes elsewhere.</p> <p>LOINC where available</p> <p>ICD-10</p> <p>RxNorm</p> <p>SNOMED CT</p>

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24	<p>Clinical Summaries</p> <p><b>EPs (Ambulatory only):</b> Provide clinical summaries to patients for more than 50% of all visits within 24 hours; pending information, such as lab results, should be available to patients within 4 days of becoming available to <b>EPs (Ambulatory only):</b> electronic accessible for viewing (e.g., patient portal, PHR, etc.) satisfies this objective.</p>	<p>§ 170.304(h) (Ambulatory only)</p> <p><b>Ambulatory only:</b> Clinical summaries. Enable a user to provide clinical summaries to patients for each office visit that include, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list. If the clinical summary is provided electronically it must be:</p> <p>(1) Provided in human readable format; and</p> <p>(2) Provided on electronic media or through some other electronic means in accordance with:</p> <p>(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and</p> <p>(ii) For the following data elements the applicable standard must be used:</p> <p>(A) Problems. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);</p> <p>(B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c); and</p> <p>(C) Medications. The standard specified in §170.207(d).</p>	<p>Revise to reflect new standards for problem lists and other vocabulary standards.</p>	<p>No change to summary record standards discussed.</p> <p>Changes to vocabs would generally be reflective of changes elsewhere.</p> <p>LOINC where available</p> <p>ICD-10</p> <p>RxNorm</p> <p>SNOMED CT</p>

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25	<p>Patient-Specific Education Resources</p> <p><b>Move to Core;</b> Use certified EHR technology to identify patient-specific educational resources and provide those resources to more than 10% of all unique patients (removed “if appropriate” – should be included with all patient encounters)</p>	<p>§ 170.302(m)</p> <p>Patient-specific education resources. Enable a user to electronically identify and provide patient-specific education resources according to, at a minimum, the data elements included in the patient’s: problem list; medication list; and laboratory test results; as well as provide such resources to the patient.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p> <p><b>Workgroup Note</b> ONC should consider removing the redundancy at the end of the sentence (i.e., “as well as provide such resources to the patient”).</p>	None.
26	<p>Secure Messaging</p> <p><i>EPs (Ambulatory only):</i> <b>(NEW)</b> Patients are offered secure messaging online and at least 25 patients have sent secure messages online</p>		<p><i>Ambulatory only:</i> <i>Secure messaging. Enable a user to electronically:</i></p> <p>(1) Send a secure message to a patient; and (2) Receive a secure message from a patient.</p> <p><b>Workgroup Note</b> Need secure definition included in here from security requirements.</p>	None.



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27	<p>Patient Communication Medium Preference</p> <p><i>EPs (Ambulatory only):</i> <b>(NEW)</b> Record patient preferences for communication medium for more than 20% of all unique patients;</p> <p>The EHR technology should allow the provider to collect, in structured data fields, the patient preference for communication medium (this should only include the medium for the communication and the language or other criteria)</p>		<p><i>Ambulatory only: Patient communication medium preference. Enable a user to electronically record, modify, and retrieve the patient's communication medium preference.</i></p> <p><b>Workgroup Note</b></p> <ul style="list-style-type: none"> <li>• No known communication medium standard.</li> <li>• Should we include examples of communication medium (e.g., paper, email, PHR or portal)?</li> <li>• Preferred language is captured under demographics (§ 170.304(c))</li> <li>• Patient reminders are to be according to patient preferences (§ 170.304(d)), but the patient's preferred communication medium is not currently required to be recorded.</li> </ul>	N/A

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28	<p>Capability to Electronically Exchange Key Clinical Information</p> <p><b>ELIMINATE</b> objective and measures by combining with exchanging summary of care record</p>	<p>§ 170.304(i) <b>(Ambulatory only)</b> § 170.306(f) <b>(Inpatient Only)</b></p> <p>Exchange clinical information and patient summary record.</p> <p>(1) <i>Electronically receive and display.</i> Electronically receive and display a patient’s summary record, from other providers and organizations including, at a minimum, diagnostic tests results, problem list, medication list, medication allergy list, and <b>(Inpatient only: procedures)</b> in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2). Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format.</p> <p>(2) <i>Electronically transmit.</i> Enable a user to electronically transmit a patient summary record to other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, and <b>(Inpatient only: procedures in)</b> accordance with:</p> <p>(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and</p> <p>(ii) For the following data elements the applicable standard must be used:</p> <p>(A) <i>Problems.</i> The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2); <b>Inpatient only: (B) Procedure.</b> The standard specified in §170.207(b)(1) or §170.207(b)(2); <b>Ambulatory only: (B) Inpatient only: (C) Laboratory test results.</b> At a minimum, the version of the standard specified in §170.207(c); and <b>Ambulatory only: (C) Inpatient only: (D) Medications.</b> The standard specified in §170.207(d).</p>	<p><b>Capabilities combined into revised certification criterion recommended in row 29.</b></p>	<p>N/A</p>

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29	<p><b>Move to Core ; EPs (Ambulatory only):&amp; EHs (Inpatient only):</b> Record and provide (send) (by paper or electronically) a summary of care record for more than 50% transitions of care for the referring EP or EH.</p> <p><b>EPs (Ambulatory only):&amp; EHs (Inpatient only):</b> Record care plan fields (goals and patient instructions) for more than 10% of all patients seen during the reporting period (majority voted in favor, minority wanted a 50% threshold)</p> <p><b>EPs (Ambulatory only):&amp; EHs (Inpatient only):</b> Record health team member (including PCP, if available) for more than 10% of all patients seen during the reporting period</p> <p><b>EH (Inpatient only):</b> Electronically transmit a summary of care record (including care plan and care team if available) to the receiving provider or post-acute care facility for more than 10% of all discharges</p> <p><b>EP (Ambulatory only):</b> Electronically transmit a summary of care record (including care plan and care team if available) to the receiving provider for at least 25 patients undergoing a transition of care</p> <p>Structured data elements to be included in care plan; lists of care team members may be unstructured data and will be defined by the provider; use of portable media (e.g., USB, fax, CD, etc.) does not constitute electronic data exchange</p>	<p>§ 170.304(i) (Ambulatory only) § 170.306(f) (Inpatient Only)</p> <p>Exchange clinical information and patient summary record.</p> <p>(1) <i>Electronically receive and display.</i> Electronically receive and display a patient’s summary record, from other providers and organizations including, at a minimum, diagnostic tests results, problem list, medication list, medication allergy list, and <b>(Inpatient only: procedures)</b> in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2). Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format.</p> <p>(2) <i>Electronically transmit.</i> Enable a user to electronically transmit a patient summary record to other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, and <b>(Inpatient only: procedures in)</b> accordance with:</p> <p>(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and</p> <p>(ii) For the following data elements the applicable standard must be used: (A) <i>Problems.</i> The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2); <b>Inpatient only: (B) Procedure. The standard specified in §170.207(b)(1) or §170.207(b)(2);</b> <b>Ambulatory only: (B) Inpatient only: (C) Laboratory test results.</b> At a minimum, the version of the standard specified in §170.207(c); and <b>Ambulatory only: (C) Inpatient only: (D) Medications.</b> The standard specified in §170.207(d).</p>	<p>Exchange clinical information and patient summary of care record.</p> <p>(1) <i>Electronically record and transmit.</i> Enable a user to electronically record and transmit a patient summary of care record which includes, at a minimum, diagnostic test results, problem lists, medication lists, medication allergy list, procedures, care plans and patient instructions.</p> <p>(2) <i>Electronically receive and display.</i> Electronically receive and display a patient summary of care record which includes, at a minimum, diagnostic tests results, problem list, medication list, medication allergy list, procedures, care plans and patient instructions. [Include only if there is an alternative to the standard: Upon receipt of a patient summary of care record formatted according to the alternative standard, enable a user to review it in human readable format.]</p> <p><b>Workgroup Statement on Intent/Standards</b> The data that is transmitted is in accordance with: (i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and (ii) For the following data elements the applicable standard must be used: (A) <i>Problems.</i> The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2); (B) <i>Procedure.</i> The standard specified in §170.207(b)(1) or §170.207(b)(2); <b>Ambulatory only: (B) Inpatient only: (C) Laboratory test results.</b> At a minimum, the version of the standard specified in §170.207(c); and <b>Ambulatory only: (C) Inpatient only: (D) Medications.</b> The standard specified in §170.207(d).</p>	<p>No change to summary record standards discussed.</p> <p>Changes to vocabs would generally be reflective of changes elsewhere.</p> <p>LOINC where available</p> <p>ICD-10</p> <p>RxNorm</p> <p>SNOMED CT</p>

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30	<p><b>Move to Core</b></p> <p>The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation</p> <p>Provide medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department</p> <p>(POS 21 or 23 )</p>	<p>§ 170.302(j)</p> <p>Medication reconciliation. Enable a user to electronically compare two or more medication lists.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p>	<p>None.</p>
31	<p><b>Move to Core:</b></p> <p>Attest to at least one submission of data to immunization registries or immunization information systems in accordance with applicable law and practice.</p>	<p>§ 170.302(k)</p> <p>Submission to immunization registries. Electronically record, modify, retrieve, and submit immunization information in accordance with: (1) The standard (and applicable implementation specifications) specified in §170.205(e)(1) or §170.205(e)(2); and (2) At a minimum, the version of the standard specified in §170.207(e).</p>	<p>ONC may consider splitting out submission if it would provide flexibility as follows:</p> <p>(1) Electronically record, modify and retrieve immunization information in accordance with ...</p> <p>(2) Electronically submit immunization information in accordance with...</p>	<p>Per <b>HITSC Surveillance Power Team</b> move to solely HL7 2.5.1</p>

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32	Reportable Lab Results to Public Health Agency  <b>Move to Core</b> ; Attest to at least one submission of reportable lab results to a public health agency in accordance with applicable law and practice.	§ 170.306(g) (Inpatient Only)  <i>Inpatient only: Reportable lab results. Electronically record, modify, retrieve, and submit reportable clinical lab results in accordance with the standard (and applicable implementation specifications) specified in § 170.205(c) and, at a minimum, the version of the standard specified in § 170.207(c).</i>	ONC may consider splitting out submission if it would provide flexibility as follows:  (1) Electronically record, modify and retrieve reportable lab results information in accordance with ...  (2) Electronically submit reportable lab results information in accordance with...	Maintain current standard and implementation guide. Vocab is LOINC when available.

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33	<p>Syndromic Surveillance</p> <p><b>Move to Core;</b> Attest to at least one submission of electronic syndromic surveillance data to a public health agency in accordance with applicable law and practice</p> <p>HITPC states CMS may consider that <a href="#">EPs (Ambulatory only)</a> submit reportable cancer conditions (attest to at least one) in accordance with applicable law and practice.</p> <p><u>HIT Standards Committee:</u> such a requirement would use the IHE cancer reporting implementation guide</p>	<p>§ 170.302(l)</p> <p>Public health surveillance. Electronically record, modify, retrieve, and submit syndrome-based public health surveillance information in accordance with the standard specified in § 170.205(d)(1) or § 170.205(d)(2).</p>	<p>ONC may consider splitting out submission if it would provide flexibility as follows:</p> <p>(1) Electronically record, modify and retrieve syndrome-based public health surveillance information in accordance with ...</p> <p>(2) Electronically submit syndrome-based public health surveillance information in accordance with...</p>	<p>Per <b>HITSC Surveillance Power Team:</b></p> <p>(1) move to solely HL7 2.5.1.</p> <p>(2) Use Hospital Implementation Guide currently in final development for inpatient setting</p>

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34	Perform, or update, security risk assessment and address deficiencies.  Address encryption for data at rest. <a href="#">EPs (Ambulatory only)</a> and EHs attest to this policy.	§ 170.302(o)  Access control. Assign a unique name and/or number for identifying and tracking user identity and establish controls that permit only authorized users to access electronic health information.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	None.
35		§ 170.302(p)  Emergency access. Permit authorized users (who are authorized for emergency situations) to access electronic health information during an emergency.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	None.
36		§ 170.302(q)  Automatic log-off. Terminate an electronic session after a predetermined time of inactivity.	No revisions required to support HITPC proposed MU Stage 2 objective and measure.  <b>NOTE</b> - Clarify whether intent is to “terminate” (end session) or “lock” (re-authenticate to access an active session)? Stage 1 test procedure was developed with termination in mind.	None.
37		§ 170.302(r)  Audit log.  (1) Record actions. Record actions related to electronic health information in accordance with the standard specified in § 170.210(b).  (2) Generate audit log. Enable a user to generate an audit log for a specific time period and to sort entries in the audit log according to any of the elements specified in the standard at § 170.210(b).	Auditable events and tamper-resistance.  (1) Record actions. Record actions related to electronic health information in accordance with the standard specified in §170.210(b). (2) Read-only. Actions must be recorded in read-only format. (3) Detection. Detect the alteration of audit logs.  =====  Generate audit report(s). Enable a user to generate an audit report for a specific time period and to sort entries in the audit log according to any of the elements specified in the standard at 170.210(b).	No change to standard discussed.

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38	<p><b>[REPEATED]</b></p> <p>Perform, or update, security risk assessment and address deficiencies.</p> <p>Address encryption for data at rest. <a href="#">EPs (Ambulatory only)</a> and EHs attest to this</p>	<p>§ 170.302(s)</p> <p>Integrity.</p> <p>(1) Create a message digest in accordance with the standard specified in 170.210(c).</p> <p>(2) Verify in accordance with the standard specified in 170.210(c) upon receipt of electronically exchanged health information that such information has not been altered.</p> <p>(3) Detection. Detect the alteration of audit logs.</p>	<p>Integrity.</p> <p>(1) Create a message digest in accordance with the standard specified in 170.210(c).</p> <p>(2) Verify in accordance with the standard specified in 170.210(c) upon receipt of electronically exchanged health information that such information has not been altered.</p>	<p>Current standard requires A hashing algorithm with a security strength equal to or greater than SHA-1 as specified by NIST in FIPS</p> <p>PUB 180-3 – suggest replacing SHA-1 with SHA-2</p>
39	<p><b>[REPEATED]</b></p> <p>Perform, or update, security risk assessment and address deficiencies.</p> <p>Address encryption for data at rest. <a href="#">EPs (Ambulatory only)</a> and EHs attest to this</p>	<p>§ 170.302(t)</p> <p>Authentication. Verify that a person or entity seeking access to electronic health information is the one claimed and is authorized to access such information.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p>	<p>None.</p>
40	<p><b>[REPEATED]</b></p> <p>Perform, or update, security risk assessment and address deficiencies.</p> <p>Address encryption for data at rest. <a href="#">EPs (Ambulatory only)</a> and EHs attest to this</p>	<p>§ 170.302(u)</p> <p>General encryption. Encrypt and decrypt electronic health information in accordance with the standard specified in §170.210(a)(1), unless the Secretary determines that the use of such algorithm would pose a significant security risk for Certified EHR Technology.</p>	<p>No revisions required to support HITPC proposed MU Stage 2 objective and measure.</p>	<p>Annex A of FIPS 140-2</p> <p>Update as necessary for FIPS 140-3</p>



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41	[REPEATED] Perform, or update, security risk assessment and address deficiencies. Address encryption for data at rest. <i>EPs (Ambulatory only)</i> and EHS attest to this policy.	§ 170.302(v) Encryption when exchanging electronic health information. Encrypt and decrypt electronic health information when exchanged in accordance with the standard specified in §170.210(a)(2).	No revisions required to support HITPC proposed MU Stage 2 objective and measure.	Maintain current standard.
42		§ 170.302(w) <i>Optional</i> Accounting of disclosures. Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in § 170.210(d).	No recommendation.	
43	Privacy and Security <b>(NEW)</b> Address encryption for data at rest for data located in datacenters and in mobile devices (e.g. laptops, PDAs, etc.)). <i>EPs (Ambulatory only)</i> and EHS attest to this policy.		Not within scope of certification. This “objective and measure” is focused on actions for meaningful use (i.e., attest to encryption of data located in datacenters and mobile devices).	N/A
44	Privacy and Security <b>(NEW)</b> 2-Factor Authentication For Controlled Substances (Providers)		Not within scope of certification.	N/A
45	Privacy and Security <b>(NEW)</b> Entity Level Digital Certificates (Providers)		Not within scope of certification.	N/A

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46	Privacy and Security <b>(NEW)</b> Single Factor Authentication (Patient Online Account)		<b>These capabilities are recommended to be incorporated into the certification criterion in Row # 23.</b>	
47	Privacy and Security <b>(NEW)</b> Audit Trails for Access to Patient Online Account			
48	Privacy and Security <b>(NEW)</b> Establish Data Provenance for Patient Portal			
49	Privacy and Security <b>(NEW)</b> Patient Portal - Secure Download Ability			
50	Privacy and Security <b>(NEW)</b> Warning Message Before Downloading PHI		Not within scope of certification. This was <b>Privacy and Security Tiger Team</b> guidance for providers.	N/A
51	Privacy and Security <b>(NEW)</b> Capability to detect and block programmatic attacks or attacks from a known but unauthorized user (such as auto lock-out after a certain number of unsuccessful log-in attempts)		<b>This capability should be consider for incorporation in the certification criterion in Row # 23.</b>	

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**HITSC Implementation Workgroup Recommendations for Certification Criteria, Standards, and Implementation Specifications to Support HITPC Proposed MU Stage 2 Objectives and Measures**

Row	HITPC Proposed MU Stage 2 Objective/Measure & Direction to HITSC	Adopted Certification Criterion <i>Ambulatory</i> / <i>Inpatient</i>	Recommended New or Revised Certification Criterion	Recommended Standard(s) and/or Implementation Specification(s)
52	<p>Amendments</p> <p><b>(NEW)</b> CEHRT should make it technically possible for providers to:</p> <p>(1) Make amendments to a patient’s health information in a way that is consistent with the entity’s obligations with respect to the legal medical record (i.e., there should be the ability to access/view the original data and to identify any changes to it)</p> <p>(2) Append information from the patient and any rebuttal from the entity regarding disputed data</p>		<p>Amendments.</p> <p>(1) Enable a user to electronically amend a data element or health record:</p> <p>(a) To replace an existing data element or health record. These types of amendments must be recorded in a way that preserves the original information.</p> <p>(b) To append patient supplied information, in free text or scanned image/document. These types of amendments must:</p> <p>(i) Directly associate with the data element or health record that is to be amended; or</p> <p>(ii) Provide an electronic link to or information about the location of the content of the amendment.</p> <p>(2) Enable a user to electronically append to a disputed data element or health record a formal rebuttal (authored by the user’s organization).</p> <p>(3) Make electronically available, upon a user’s request, a historical account of amendment(s).</p>	None.

HITSC makes these recommendations with the understanding that ONC will evaluate and refine prior to proposing these in rulemaking.

**HITSC Implementation Workgroup Recommendations for Certification Criteria, Standards, and Implementation Specifications to Support HITPC Proposed MU Stage 2 Objectives and Measures**

Row	HITPC Proposed MU Stage 2 Objective/Measure & Direction to HITSC	Adopted Certification Criterion <i>Ambulatory /Inpatient</i>	Recommended New or Revised Certification Criterion	Recommended Standard(s) and/or Implementation Specification(s)
53	<p>Patient Matching</p> <p>(1) Identify standard formats for data fields that are commonly used for matching patients</p> <p>(2) Specify standards that describe how missing demographic data should be represented during exchange</p> <p>(3) Consider whether USPS address validation and normalization would be beneficial to improved matching accuracy and whether it should be added to the demographic standards</p> <p>Certification criteria should include testing that:</p> <p>(1) Appropriate transactions are sent/received with correct demographic data formats; and</p> <p>(2) Data entry sequences exist to reject incorrectly entered values</p>		Defer to best practices recommendations provided by the <b>Patient Matching Power Team</b> .	Defer.

HITSC makes these recommendations with the understanding that ONC will evaluate and refine prior to proposing these in rulemaking.

**HITSC Implementation Workgroup Recommendations for Certification Criteria, Standards, and Implementation Specifications to Support HITPC Proposed MU Stage 2 Objectives and Measures**

Row	HITPC Proposed MU Stage 2 Objective/Measure & Direction to HITSC	Adopted Certification Criterion <i>Ambulatory</i> / <i>Inpatient</i>	Recommended New or Revised Certification Criterion	Recommended Standard(s) and/or Implementation Specification(s)
54	<b>No applicable MU objective/measure</b>	§ 170.302(n)  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.	No recommended revisions.	None.

**KEY**

This table is designed for printing on legal paper (8.5” x 14”).

Column 1 = Row numbering. There are a total of 40 rows in the table.

Column 2 = HITPC proposals for MU Stage 2, including new objectives and measures and the elimination or “combining of objectives (and measures).” In addition, column includes HITPC recommendations to HITSC.

Column 3 = Current certification criteria.

Column 4 = Implementation Workgroup’s recommended new or revised certification criterion, as well as Implementation Workgroup statements of intent.

Column 5 = Implementation Workgroup’s recommended standard(s) and/or implementation specification(s) to support MU Stage 2.

**Font Colors**

**Black** = Objectives/measures/certification criteria/standards/implementation specifications related to both ambulatory and inpatient settings.

**Blue** = Objectives/measures/certification criteria related only to the ambulatory setting. Noted as Ambula. *Ambulatory only*:

**Red** = Objectives/measures/certification criteria related only to the inpatient setting. Noted as *Inpatient only*:

**Green** = Identifies new objectives and measures.