Attachment 2: Detailed Comments on Proposed Stage 1 Objectives and Measures of Meaningful Use for Eligible Hospitals

Proposed Objective	Proposed Measure	Clarifying Comments	Draft Recommendation
1. Use of CPOE for orders (any type) directly entered by authorizing provider (for example, MD, DO, RN, PA, NP).	1. For eligible hospitals, CPOE is used for 10% of all orders.	• Need definition of denominator – what is included in orders of "any type"? ONC IFR lists 11 types. • As currently specified, the denominator combines paper and electronic processes. Measurement would require manual review of 100 percent of paper charts to count all orders and distinguish those placed through verbal/paper means from orders placed through CPOE. Efficient chart review for quality reporting takes approximately 20 minutes per chart, resulting in tremendous burden. A hospital with 15,000 discharges would spend 5,000 hours per year reviewing charts. • There are times when scribes are necessary and their use should be counted (such as during surgery or when an on-call physician places a verbal order to address an emergent problem). • Order sets should be "unpacked" to count individual orders • Orders placed in the ED for patients that are subsequently admitted should be included in the measure calculation.	• Do NOT use a measure with a denominator that requires review of paper charts. • Replace the proposed measure with one of the following alternatives: 1: Hospital has CPOE activated (preferred). 2: At least 10% of unique patients have had at least one order placed through CPOE. 3: At least 10% of medication orders placed through CPOE (can be calculated from pharmacy information system). *If option 2 or 3 is chosen, require measure calculation as part of EHR certification process.*

2. Implement drug-drug, drug-allergy, drug-formulary checks.	2. The eligible hospital has enabled this functionality.	• This measure combines two clinical alerts with an efficiency alert. We recommend separating them. • Drug-drug and drug-allergy checks happen in both pharmacy information systems and as part of CPOE. Both approaches contribute significantly to medication safety. • For inpatient settings, the drug-formulary check is generally defined as checking against the hospital's formulary, not external insurer formularies.	Create two measures: • Hospital has implemented drug-drug and drug-allergy checks (clinical). • Hospital has implemented drug-formulary checks (efficiency).
3. Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT ®.	3. At least 80% of all unique patients seen admitted to the eligible hospital have at least one entry or an indication of none recorded as structured data.	• Currently installed EHRs generally use text or proprietary coding today, so there will be an adjustment process. Physician-facing screens will likely continue to be in more "accessible" language than structured code sets, with mapping to standards. Mapping systems must be built and deployed. During transitions, mapping to ICD-9 may happen at the end of a stay. • The HIPAA transactions standards require a move to ICD-10-CM in 2013. The measure should be updated over time to harmonize with this change.	• Require measure calculation as part of EHR certification process.
4. Maintain active medication list.	4. At least 80% of all unique patients admitted to the eligible hospital have at least one entry (or an indication of "none" if the patient is not currently prescribed any medication) recorded as structured data.		• Require measure calculation as part of EHR certification process.

5. Maintain active medication allergy list.	5. At least 80% of all unique patients admitted to the eligible hospital have at least one entry or (an indication of "none" if the patient has no medication allergies) recorded as structured data.		• Require measure calculation as part of EHR certification process.
6. Record demographics: • Preferred language. • Insurance type. • Gender. • Race. • Ethnicity. • Date of birth. • Date and cause of death in the event of mortality.	6. At least 80% of all unique patients admitted to the eligible hospital have demographics recorded as structured data.	• All fields may not be complete for all patients. For instance, some patients may not be willing to report race and ethnicity. Insisting that this data be provided could interfere with care delivery process. Therefore, missing data in two or three of the 7 fields should not disqualify a record from counting toward the numerator. • In Massachusetts, field experience with reporting race and ethnicity according to specific standards (such as OMB definitions) found that significant training across many different staff members is required to achieve uniformity. While clearly important for evaluating and addressing disparities in care, the time and resources required to achieve uniform recording of race and ethnicity data should not be underestimated. • Cause of death is determined by the coroner and is not generally available to the hospital at the time of death. Considerable coordination with coroner is required to obtain this data and timely receipt may be beyond the hospital's control. • Date of death is known only when the death occurs at the reporting hospital.	• Require measure calculation as part of EHR certification process. • Allow records with two to three missing fields to count toward the numerator. • Remove cause of death.

7. Record and chart changes in vital signs: • Height. • Weight. • blood pressure. • Calculate and display: BMI. • Plot and display growth charts for children 2-20 years, including BMI.	7. For at least 80% of all unique patients age 2 and over admitted to eligible hospital, record blood pressure and BMI; additionally plot growth chart for children age 2-20.	• General acute care inpatient setting not appropriate for plotting growth charts, and most children are admitted infrequently, so no trend data are available. Growth chart is useful in children's hospitals. • Patients admitted to the hospital are not necessarily routinely measured for height. Including this measure would change the requirements for nursing assessments. If maintained as a vital sign for inpatient care, estimated or reported height may be recorded. • Other vital signs are more appropriate to the inpatient setting, such as temperature, blood oxygen levels, heart rate, and glucose levels. EHRs should be capable of showing trend for these values (hourly to daily). • As currently specified, this is a test of 3 measurements being taken, 2 calculations being performed, and two displays viewed. Not all fields may be complete for all patients. Missing two or three of these steps should not disqualify a patient from the numerator. • Do EHRs provide tag that calculations have been performed and displays viewed?	• Remove growth charts for children for general hospitals. Add temperature, blood oxygen levels, heart rate, and glucose levels, with capacity to trend values • Allow records missing two or three of the bundled fields and processes to be included in the numerator. • Require measure calculation as part of EHR certification process, including tags that indicate when BMI calculation has been performed and plot has been displayed.
8. Record smoking status for patients 13 years old or older.	8. At least 80% of all unique patients 13 years old or older seen admitted to the eligible hospital have "smoking status" recorded.		• Require measure calculation as part of EHR certification process.

9. Incorporate clinical lab-test results into EHR as structured data.	9. At least 50% of all clinical lab tests ordered whose results are in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.	• This measure is poorly specified. Requires specific definitions of tests that are positive/negative and in numeric format. • Automated measurement would require flags in EHR for when a result is in positive/negative or numerical form. • Very challenging to calculate. Unless limited to tests in the EHR, would require looking across electronic and paper processes. • ONC IFR specified LOINC codes, which CHIME survey data indicates is used by 40.5% of its members' institutions.	• Revise objective to read: At least 50% of all clinical lab tests incorporated into the EHR whose results are in a positive/negative or numerical format are incorporated into certified EHR technology as structured data. • Require measure calculation as part of EHR certification process.
10. Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, and outreach.	10. Generate at least one report listing patients of the eligible hospital with a specific condition.	• In the hospital setting, analysis of patient data often drives off of post-discharge coding of diagnoses and procedures, rather than problem lists.	
11. Report hospital quality measures to CMS or the states.	11. For 2011, provide aggregate numerator and denominator through attestation as discussed in section II(A)(3) of the proposed rule. For 2012, electronically submit the measures as discussed in section II(A)(3) of the proposed rule.	• Many concerns, addressed separately.	• Multiple, addressed separately.

12. Implement 5 clinical decision support rules related to a high priority hospital condition, including diagnostic test ordering, along with the ability to track compliance with those rules.	12. Implement 5 clinical decision support rules relevant to the clinical quality metrics the eligible hospital is responsible for as described further in section II(A)(3) of the proposed rule.	• The medication alert measures are also clinical decisions support rules. • Use of order-sets is a form of clinical decision support. • Tracking compliance can be challenging, as specific clinical scenarios warrant different responses. For instance, patients in an intensive care unit may receive combinations and doses of medications that would be inappropriate in other departments. • Hospitals sometimes implement rules that cannot be overridden, so that there is no measure of compliance (clinician has not made an accept/override choice).	
13. Check insurance eligibility electronically from public and private payers.	13. Insurance eligibility checked electronically for at least 80% of all unique patients admitted to the eligible hospital.	• Billing systems are not generally part of the hospital EHR system, although they are almost always integrated. • Covered under HIPAA administrative simplification regulations. • Major concern that if this is maintained, will require these systems to be certified, which is unnecessary and wasteful.	• Remove this objective and measure.
14. Submit claims electronically to public and private payers.	14. At least 80% of all claims filed electronically by the eligible hospital.	• Billing systems are not generally part of the hospital EHR system, although they are almost always integrated. • Covered under HIPAA administrative simplification regulations. • Major concern that if this is maintained, will require these systems to be certified, which is unnecessary and wasteful.	• Remove this objective and measure.

15. Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies, discharge summary, procedures), upon request.	15. At least 80% of all patients who request an electronic copy of their health information are provided it within 48 hours.	• Requires separate tracking of who requests copy and when (date stamp). • Use of portable media such as USB presents security problems for the hospital (both security of PHI on the portable media and security of the hospital's IT systems when portable media are introduced). • Use of structured data for this purpose (such as CCD) will be valuable in the future, but not possible for most providers in the near term. • To ensure patients can read the information without needing special software, most likely format in near term is a PDF of electronic/scanned chart. The time period (48 hours) is too short and more proscriptive than HIPAA requirements. Clinicians must review information and ensure that they have received all test results and discussed sensitive results with the patient before release, per CLIA and state laws. Staff must be available to receive and fulfill requests, and required workforce may not be available on weekends and holidays.	• Require measure calculation as part of EHR certification process. • Revise to be electronic copy of health information "maintained in electronic form" (rationale: consistent with ARRA privacy provision). • Drop the time requirement in favor of existing HIPAA policies on providing patients with copies of medical records.
16. Provide patients with an electronic copy of their discharge instructions and procedures at time of discharge, upon request.	16. At least 80% of all patients who are discharged from an eligible hospital and who request an electronic copy of their discharge instructions and procedures are provided it.	• Requires separate tracking of who requests copy and when (date stamp); such tracking is not currently part of EHR systems. • Use of portable media such as USB presents security problems for hospitals (both security of PHI on the portable media and security of the hospital's IS systems when portable media are introduced). • Formats likely to include PDF and Word documents.	• Require measure calculation as part of EHR certification process

17. Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, allergies, diagnostic test results) among providers of care and patient authorized entities electronically.	17. Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information	• Specificity? Does this need to be a "live" test? • The definition of "key clinical information" should be expanded to include test results and dictated documents (H&P, operative report, diagnostic report, etc.), which are the most in demand by physicians. • The test should involve the specific subset of key clinical information that is most appropriate to meet current local needs and HIE infrastructure (for example, in the context of a local HIE, a collaboration with local ambulatory physician groups, or a pilot to provide data to long-term care facilities).	• Require providers to perform this test only for the subset of clinical information that is most appropriate to meet current local needs and HIE infrastructure, not all listed clinical information.
18. Perform medication reconciliation at relevant encounters and each transition of care. Medication reconciliation = the process of identifying the most accurate list of all medications that the patient is taking, including name, dosage, frequency and route, by comparing the medical record to an external list of medications obtained from a patient, hospital or other provider. Transition of care = transfer of a patient from one clinical setting (inpatient, outpatient, physician office, home health, rehab, long-term care facility, etc.) to another or	18. Perform medication reconciliation for at least 80% of relevant encounters and transitions of care The numerator for this objective is the number of relevant encounters and transitions of care for which the eligible provider or an inpatient facility/department (POS21) that falls under the eligible hospital's CCN was a participant during the EHR reporting period where medication reconciliation was performed. The	• The proposed definition does not match current hospital medication reconciliation processes. • Medication reconciliation is not an automated EHR process. It is a human workflow process that is supported by the EHR. • Availability of a single medication list in the EHR that is available to all clinicians at the point of care makes medication reconciliation within the institution unnecessary. • The term "transitions of care" includes an array of transfers across the continuum of care that are not currently supported by information exchange among providers. Consequently, medication reconciliation as defined is not possible. Med reconciliation across settings (hospital to LTC or hospital to physician office, etc) is not possible given current levels of information exchange	• Defer this measure until health information exchange supports it • If objective is kept, measures on medication reconciliation should be limited to appropriate transfer points internal to hospital, such as ED to ICU, ICU to general med/surg unit, etc. (including on admission and discharge) • Recommended alternative measure: Hospital is using EHR to support medication reconciliation • If a percentage measure

from one EP or eligible hospital (as defined by CCN) to another. Relevant encounter = any encounter that the EP or eligible hospital judges performs a medication reconciliation due to new medication or long gaps in time between patient encounters or other reasons determined by the EP or eligible hospital. We encourage comments on whether our descriptions of "transition of care'' and ''relevant encounter'' are sufficiently clear and medically relevant.	denominator for this objective is the number of relevant encounters and transitions of care for which the EP or an inpatient facility/ department (POS 21) that falls under the eligible hospital's CCN was a participant during the EHR reporting period.	• Calculation of this measure across all admissions would be overly burdensome to report. Inclusion of ED in measurement is important as many patients enter hospital via ED and first discuss current medications in that setting. • Electronic medication reconciliation tools in use today do not generally include a flag or other measure to indication that med reconciliation was done or done accurately, so not currently easy to calculate. • The Joint Commission is currently revising its National Patient Safety Goal on medication reconciliation. CMS should not attempt to define medication reconciliation processes and requirements separately and differently from The Joint Commission. Doing so will cause confusion and could actually slow efforts to build and spread best practice models of medication reconciliation.	is included, a sampling methodology should be developed to reduce reporting burden. • If a percentage measure is included, require measure calculation as part of EHR certification process
19. Provide summary care record for each transition of care and referral. Transition of care = transfer of a patient from one clinical setting (inpatient, outpatient, physician office, home health, rehab, long-term care facility, etc.) to another or from one EP or eligible hospital (as defined by CCN) to another.	19. Provide summary of care record for at least 80% of transitions of care and referrals The numerator for this objective is the number of transitions of care and referrals for which the EP or an inpatient facility/department (POS	• How does this measure relate to the inpatient setting? How is transition of care different from discharge? Would discharge instructions and summary care record both be required when a patient leaves the hospital? • What is a referral in context of an inpatient stay? Would specialty consult during a stay require provision of a summary care record? For referrals post-discharge, it is unclear how a hospital could do this before a patient has a visit scheduled or even has selected a specific provider selected from a short list of referrals.	• The concept behind this measure and its measurement must be clarified, particularly in the context of inpatient care. If something other than discharge is intended, require provision of summary care record on request only. • Require measure

Referral is not defined.	21) that falls under the eligible hospital's CCN was the transferring or referring provider during the EHR reporting period where a summary of care record was provided. The summary of care record can be provided through an electronic exchange, accessed through a secure portal, secure e-mail, electronic media such as CD or USB fob, or printed copy. The denominator for this objective is the number of transitions of care for which the EP or an inpatient facility/ department (POS 21) that falls under the eligible hospital's CCN was the transferring or referring provider during the EHR reporting period.	• Who does the summary care record go to? The patient or the next provider to care for the patient? • How do you count transitions of care and referrals? • Use of portable media such as USB presents security problems for the hospital (both security of PHI on the portable media and security of the hospital's IT systems). • Use of structured data for this purpose (such as CCD) will be valuable in the future, but not possible for most providers in the near term.	calculation as part of EHR certification process.
20. Capability to submit electronic data to immunization registries and actual submission where required and accepted.	20. Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries.	• Does this need to be a "live" test? • Who decides when actual submission is required and accepted?	

21. Capability to provide electronic submission of reportable laboratory results (as required by state or local law) to public health agencies and actual submission where it can be received.	21. Performed at least one test of the EHR system's capacity to provide electronic submission of reportable laboratory results to public health agencies (unless none of the public health agencies to which eligible hospital submits such information have the capacity to receive the information electronically).	• Does this need to be a "live" test? • Who decides when actual submission is required and accepted?	
22. Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.	22. Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies (unless none of the public health agencies to which an eligible hospital submits such information have the capacity to receive the information electronically).	• Does this need to be a "live" test? • Who decides when actual submission is required and accepted? • Public health departments at local, state and national levels must move toward standard data elements, formats, and information exchange protocols. Hospitals currently submitting electronic data to public health are overwhelmed by overlapping and conflicting requests from multiple agencies, resulting in significant burden. For instance, some syndromic surveillance systems rely on demographic and limited symptom data, while other systems want real time laboratory and pharmacy feeds.	• Require test for submission to a single public health agency only • Require actual submission of only demographic information and key lab findings.
23. Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.	23. Conduct or review a security risk analysis per 45 CFR 164.308 (a)(1) and implement security updates as necessary.		